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EDUCATIONAL METHOD

A Journal of Progressive Public Schools

Volume IX NOVEMBER, 1929 Number 2

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EDUCATIONAL METHOD

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EDUCATIONAL METHOD

VOLUME IX NOVEMBER, 1929 NUMBER 2

EDITORIALLY SPEAKING

BUSINESS OR PROFESSION

A recent plea to treat education as strictly business has a manly sound. As an attempt to curb sentimentality and establish common sense and reality such a plea deserves support. Nevertheless it involves a serious fallacy. Teaching is not a business but a profession. As such it must be regarded very largely as a mission. Those who go into it should be animated by the ambition to serve, not merely to enjoy an occupation and earn a livelihood.

The mere fact that many who profess such ideals are not wholly sincere and whole-hearted in them is no argument against the contention. Nor does setting up the concept of business absolve educators from striving to make of teaching an opportunity to serve. Business is still to a deplorable extent what Sherman said war is. But there is no sufficient reason why it should remain so. Examples abound of those who have sought successfully to exemplify very high ideals, even ideals of service and sympathetic consideration of the needs and rights of others in business.

Doubtless we must expect that the cynicism that has invaded other regions in which human relations are dominant will manifest itself in education. The spirit of the times appears to foster it. One is nothing these days if not hard-boiled. "It is the war!" But we shall get over it in due course. Meanwhile no harm but much good may come from recognizing the disease for what it is. Even though it must run its course, we should plan for as early a recovery as possible.

Professor Palmer's admirable distinctions between a trade and a profession ought to help. The latter, he says, is entered upon only after a long period of rigorous preparation; it maintains high standards of ethics and of performance and it gives an unmeasured service. Switzerland has made an interesting attempt to elevate certain occupations ordinarily regarded as mere trades to the level of professions. Carpenters, for example, must take a regular course of instruction and secure a government license before they are allowed to practise the art of the saw and plane. The casual visitor happening in upon a convention of industrial workers is likely to mistake it for a group of educators talking about schools, or of physicians discussing the latest developments in medicine. To elevate carpentry and plumbing is certainly a more laudable ambition than to debase teaching. Our aim should be to make teaching truly a profession as soon and as completely as possible. Regarding it as merely business will not assist us much in attaining this end.

SIGNIFICANT CRITERIA FOR THE APPRAISAL OF THE VALIDITY OF CONTEMPORARY EDUCATIONAL PHILOSOPHY[1]

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When I received the invitation to appear on this program and discuss the subject assigned to me, I accepted with alacrity. Never in my life have I seen so many intriguing problem-words organized to make a single title. "Significant Criteria," "Appraisal," "Validity," "Philosophy" —any one of these alone is thought-provoking. But the aggregation is simply staggering in its stimulating potentialities. I congratulate our program maker on his skill in formulating titles, and publicly thank him for the compliment of considering me competent to discuss such a mighty subject. However, as I have valiantly wrestled with the problem of getting my thoughts on paper, a disturbing suspicion has arisen in my mind and grown to sizable proportions. I am not so sure as I was that his action in inviting me was determined by his belief in my ability. It may have been based on the understanding of human nature expressed in the proverb, "Fools rush in where angels fear to tread."

I judged from the time limit that I was not expected to write a textbook on philosophy or attempt to deal adequately with the gigantic proposition implicit in the title of my paper. I suspect, rather, that my subject was meant to be an invitation to come here and exhibit the workings of my own mind. On several occasions I have publicly expressed radical convictions in regard to what education ought to be, and I am glad to offer myself as a queer specimen for observation to determine "how folks get that way." Accordingly, I shall present what I have to say merely as an expression of *personal* convictions.

First, I shall indicate the sense in which I am interpreting the phrase, "validation of philosophy."

Second, I shall picture what I conceive "Contemporary Educational Philosophy" to be.

Third, I shall indicate the source from which I derive my criteria of appraisal.

Last of all, I shall list the criteria I judge to be significant.

The basic problem we have to consider is, "How can one tell whether a given philosophy is valid or not?" Valid often has the meaning of "true," or "corresponding to reality," or "so well established on the basis of proved fact that it has no known inadequacies." My personal conviction on the question of validity is that, in the strict sense of the term, valid has no meaning when applied to philosophy. The validity of a philosophy is not a matter to be determined *by reason,* but *by feeling.* Each one of us feels that the philosophy he holds is right. Now the dictates of feeling are absolute and primary. The sources of convictions are hidden deep in the inner nature of man and are beyond control. No matter how reasonable a philosophy may be, one may feel intuitively that it is wrong, and reject it utterly.

From my point of view, spirit is supreme over fact. Whenever feelings and facts clash, it is the facts which yield, if only

[1] A paper read before the College Teachers at Cleveland, February, 1929.

the one who has the feelings holds to them strongly enough. Personally, I admit no limitations whatsoever on the powers of the human spirit. All progress arises as an inner intuitive conviction, held by faith, in the face of overwhelming facts to the contrary. For years men believed that man would never be able to fly. Reputable scientists had proved that it was impossible to construct a heavier-than-air machine that could sustain its own weight in free flight. The Wright brothers felt differently, and in the face of facts proved their convictions valid.

The best justification for a philosophy is that a personality holds it. When the Jews pressed Jesus to validate his philosophy, he eventually uttered what are probably the most significant words ever spoken, "Before Abraham was, I am." From this point of view, validity has no meaning applied to philosophy because a thing is properly called valid in the scientific meaning of the term only when it is a true sign of something else. Feelings cannot be validated, because they are the primary stuff from which all else arises.

There is a sense, however, in which the term valid may properly be applied to a philosophy. Our philosophies are not fixed. Like railroad timetables, they are subject to a change without notice. Any experience which enlarges or diminishes the inner nature of a man, at once makes the philosophy he formerly held invalid. And we all *do have* experiences which profoundly modify our innermost selves. If the shifts in feeling, which we all experience, were all in a given direction it might be possible to follow these converging trends to their ultimate destiny and set up a philosophy which would reflect the convictions to which all men would ultimately attain.

Unfortunately, we live in a complex world, subject to the play of forces which shift feelings in every possible direction. Converging trends are difficult to discover. Moreover feelings, so far, are not subject to experimental control in the laboratory. The attempt to cross-section an emotion results in its disappearance. We can study the outward manifestation of feeling in others, we are even beginning to trace somatic processes which appear to be the psycho-physical counterpart of our emotional disturbances, but the essential nature of thought and feeling lies beyond our reach. Until man can escape from himself at will, and can study the world from the outside, as it were, the ultimate in philosophy cannot be determined by reason.

To validate a philosophy, then, can only mean to test its adequacy by bringing into court systematically all of known experience and making sure none of it cannot be explained. Validation of philosophy connotes but little more than rationalization. We can validate our own philosophy but no one can do it for us. Nor can we make certain that the results of our validation will stand. The very next experience may upset the most carefully validated philosophy and reveal a world of existence and feeling hitherto unsuspected. It is possible for each one of us to appraise the validity of the philosophy he has erected upon the foundations of his experiences and to make sure it has kept pace with his own growth, but the result of his appraisal is not binding on the next man, nor is our appraisal binding on him.

In the world of logic and of objective fact, if you grant a premise, the conclusion is inescapable. But not so in the world of feeling. The man who dares to follow his convictions often escapes from the deterministic world of science and achieves freedom. He becomes a creator, a god. Time, space, things, persons become what he chooses to make them. There are two dis-

tinct types of experiences in life: (1) the deterministic, cause-and-effect variety known to science and (2) the creative experiences which alter life fundamentally and give rise to new deterministic sequences. Although most of us are so pitifully tied and bound by the limited character of our perception of experience that we resemble slaves rather than freemen, yet each one of us has experienced, sometime, somewhere, the joy of creative self-expression. We have all "tasted" freedom and can never again endure complacently our prison life on the deterministic level. Therefore, it is proper for any individual to attempt to validate his own philosophy even though validation cannot mean the same kind of correspondence with reality that validation in the objective sciences means.

Turning now to the problem of what is meant by contemporary educational philosophy, I can speak in safer terms. We live in a transition age, and all our social institutions and ideals are undergoing transformation. Many reformations of ideals, old and new, are almost daily presented for our acceptance. Actually, too, the schools change before our very eyes. The best summary of these changes of which I know is that given in the Twenty-sixth Yearbook of the National Society for the Study of Education. The report of the committee appointed to formulate a progressive statement of philosophy to serve as a foundation for curriculum making says that education today *is moving* from "imposition on children of adult forms of thought, feeling and behavior" toward goals "dictated by children's interests, needs, capacities for learning and experience, as well as by the larger demands of society"; from education as "subject matter set out to be learned, repeated, accepted ready-made, given back without adequate understanding" to education as "change in control of conduct," as "ways-of-responding to be built by the learner into his own character"; from a teacher-controlled process to a process in which the learner, with a "maximum of self-direction, assumes responsibility *for the exercise of choice* in terms of life-values"; from a curriculum organized by subjects to "materials of instruction assembled from the starting point of the needs of the learner, irrespective of the content and boundaries of existing subjects."

These are profound and startling changes. They are revolutionary in character. When children in school begin to study "the problems of economic, political, social and individual life," not academically, but in ways which result in purposes and efficient controls built by the learner into his very nature, something is going to happen to society when the same children become of age. Some of the extreme radicals, like myself, claim that the time has come for man to take charge of his own evolution, to remake society on a more intelligent model, and to determine his own destiny. Others, the extreme conservatives, view with consternation what they regard as an ignorant attempt to overthrow the wisdom of the past, to flaunt social control, to magnify individualism, to abandon the system, orderliness, and substantial achievements of the past in order to follow a will-o'-the-wisp of vain imaginings, sentiment, and undisciplined zeal.

Whatever may be your point of view, the fact as stated by the committee remains. Our schools *are* changing in the direction of the radical ideals. We *are* paying more and more attention to children's natures and needs, we *are* giving children the opportunity to participate more and more completely in the setting and making of lessons as well as in the learning of them. Education is changing, and changing rapidly. Subject matter boundaries *are* being

broken down, methods having new aims *are* being used. Appraisals *are* being made on the basis of new standards of value.

The old philosophy regarded education as a process of training for a future life, a process of acquisition, a process of social importance, socially controlled for social ends. The new philosophy emphasizes the individual and declares that its aim is nothing short of integration of personality, although it recognizes that integration may be individual and social. It frankly declares it doesn't know where it is going, although it is sure it knows the way. All round the world the leaven is working: Germany, Russia, China, India, Africa, and South America have their "New Schools," as well as progressive United States.

The causes which have given rise to the new educational philosophy are easily traced. First, of course, must be placed the growth of the democratic spirit. More people than ever before in the world's history have come to feel that it is wrong for one person to *will to control* the will and behavior of another. Children these days are not compelled to submit to parental control; it is natural that they should resent teacher control. Parents cannot bear to punish their own children; it is natural they should resent having them punished by anyone else. Parents themselves are questioning the standards and ideals under which they were brought up. They cannot bring themselves to teach their children the ideals they themselves have discarded and they have no new ones to substitute for the old. Lack of parental control and new conditions of living—movies, autos, and more than all else an abundance of money—have created a condition which makes the old formal disciplinary education an impossibility even for those who regard it as the best.

A second factor which has powerfully influenced education is the rapidly growing accumulation of knowledge in regard to individual differences and the way children learn, which has come from the scientific study of human behavior. Today we know teachers must reckon with many and stubborn forces. The child is no piece of putty to be moulded to any shape at will; he lives and grows in accordance with natural laws that even teachers must respect.

The third factor which has stimulated change has been the dissatisfaction with results as revealed by the school surveys and educational tests. The old education proved to be so ineffective that any new method couldn't be worse. On every count our schools have been proved to be grossly and hopelessly inefficient. Better ways of teaching became imperative.

Of course, I recognize that the majority of school people do neither philosophic nor creative thinking. They *feel,* however; they experience dissatisfaction. Consequently, whenever a new suggestion comes along, they snatch at it as a drowning man clutches at straws. Here and there a new philosophic truth is uttered and crystallized into a pattern of behavior. The masses copy the pattern and the national philosophy is changed, unwittingly. The amazing thing is that such haphazard methods can produce such a persistent direction of progress as is indicated by the statements of the committee.

The new philosophy is clean-cut and distinct. To the conservatives the most irritating thing about it is that it insists on regarding itself as "different." It brooks no allegiance with the old education. It believes in education from within, not from without; it emphasizes creation, not acquisition, it looks upon learning as growth in accordance with natural law and not as an artificial man-made process of acquisition. It makes of teaching "service," not "domination." It subordinates subject matter, times, places, and agents

to *personality*. It writes its course of study in terms of personality qualities: vision, self-direction, self-appraisal, self-control, coöperation. It abandons knowledge for purposeful activity and character. If the children happen to learn something as a by-product of their experiences, no harm is done, but the acquisition of formal knowledge, habits, and ideals in terms of academic standards are regarded as less than valueless. They are excess baggage and likely to prove impediments to progress. It is an item of the creed of the new philosophy that efficient, joyous, creative achievement *inevitably* yields all the functional knowledge that is of any value; that assimilation of wisdom takes place only through a process of active creation and not by passive absorption; that the supreme goal of education is the development of a free, active, self-disciplined spirit, aware both of his own powers and of his place in the cosmic process, and set on contributing to the furtherance of that process.

Can such a philosophy of education be validated? I say yes, and this is the reasoning by which I justify my answer.

Children are born into a world which has been running a long, long time. Moreover, they are functional parts of that world, heirs of the accumulated products of the experiences of all the past ages. They are the determiners of future destiny. It seems reasonable to suppose that a study of the evolutionary history of the creative process will throw some light upon the nature of man and the meaning of life as a whole.

When we make such a study, what do we find? It depends upon the person who does the looking. I find a perfectly consistent, orderly process moving majestically forward toward an understandable, if vaguely defined, goal—a goal which has marvelous stimulating and interpretative potentialities when used as the basis for a philosophy of education.

From my point of view, the outstanding characteristics of the evolutionary process are its creative aspects. In his reaches into the past to discover the beginnings of things man finds *energy* as the simplest, most primary of experiences. Energy is formless, mysterious, intangible but persistent, ever changing, and yet measurably effective. Energy organized yields matter and to this day tangible evidences of both the integration and disintegration of matter present themselves to the observant mind. Matter is not energy but a manifestation of energy which emerges when various forms of energy are brought into a peculiar type of relatedness. So, in similar fashion, matter organized in a peculiar way yields life, life organized in its distinctive fashion yields intelligence, intelligence organized in a manner singularly its own yields the free spirit we know as personality, the first of the evolutionary products able to escape from the deterministic sequence and mould the process to its own desires. Personality is not intelligence, intelligence is not life, life is not matter, matter is not energy. Each level of existence is dependent upon the establishment of a peculiar form of organization of the elements on the next lower level. Each new level is unpredictable from the old, each includes all those that have gone before it, *and some new* form of expression of their latent powers. Moreover, all along the way standardized patterns of existence maintain, generation after generation, their unchanging forms, as warning of what happens when structure is allowed to triumph over function. All along the way these impressive exhibits of past models of the efficient life of their day and stage of evolution serve to reveal the story of how advance has been achieved. Continually, there has been greater division of

labor with corresponding specialization of structure. Coördination of effort is also provided for by the establishment of new and better organs of control. Always progress has meant great unity of effort, greater coöperation between the existing orders of creation, greater integration. An amœba lives a relatively isolated individual existence, although even in the life of an amœba there is greater coördination between matter and energy than existed previous to the emergence of life. But consider the series, amœba, starfish, worm, fish, frog, dog, primitive man, modern man. Note the steady increase in the powers and functions exercised by the individual in virtue of his more highly specialized organs and the greater integration of his controls. In passing from animal to animal up the evolutionary scale, note the increasing knowledge of environment and self possessed by each higher form. What is the limit of this evolutionary tendency? Is it not Omniscience? The trend of evolution is toward unlimited increase in knowledge. Note also the increasing control of environment exercised by each higher level. What is the limit of this tendency? Is it not Omnipotence? The trend of evolution is toward increased powers of control. Look once more at the evolutionary series. Note the increasing complexity of relationship between individuals at each higher level. Not only are they more *interdependent,* but they become increasingly *more aware* of their interdependence. Today in man the dynamic center of the evolutionary process is the awakening of individual consciousness to social meanings. The League of Nations and the movement to abolish war are expressions of the socialization of man which is taking place in every phase of life. Unfortunately we have no single word which expresses infinite socialization, that is, infinite unity on the basis of mutual understanding and sympathy. For a single word, "love," must serve as a substitute with such connotations as are implied by the phrases, the Brotherhood of Man and the Fatherhood of God.

Looked at from this point of view, what sort of a picture do you get of the goal of the cosmic process as a whole? Omniscience, Omnipotence, Universal Unity, and Coöperation on the basis of Love. Does not the phrase, integration of personality, tell the story in a nutshell? Now consider in similar fashion the evolution in the life of a single individual as he passes from the cradle to the grave. Does not a similar process of integration take place? Does not the phrase, integration of personality, summarize in one statement all we know of the nature of the social and individual processes and point the way toward further progress? It is on this conception of cosmic evolution that the philosophy of the new education is founded.

If I have made my thought processes sufficiently clear, you will see that it is easy to list criteria by which philosophies of education and methods of teaching may be tested. The more fundamental of these are:

1. Aims.

Are the goals of the educative process expressed in terms of integration of personality, and are methods, means, measurements, and all other aspects selected, used and interpreted in terms of this aim alone?

2. Method.

Is the proposed philosophy based on respect for the personalities to be educated as sovereign centers of choice and responsibility? This means that no use of power, knowledge, position, prestige, or any extrinsic forces whatsoever shall be contemplated by the proposal. The one means of control which is not taboo is the power inherent in truth. The teacher must be under the necessity of "selling" his wares

to his pupils on the basis of their merits. It is the pupil who must have the say and not the teacher.

3. Socialization.

Is education regarded as a coöperative enterprise between pupils, teachers, and society for the common good? There is as much need for the pupils to respect the teacher's personality as there is for the teacher to respect the pupil's personality, and both need to respect the larger social personality of which they are a part. The proposed philosophy must provide for the orientation of the individual in the cosmic process and reveal his potentialities for helping or hindering that process.

4. Means.

Does the proposal emphasize growth through self-directed creative solution of problems of increasing difficulty rather than mere acquisition and achievement?

This means that nothing may be taught as sacred, final, perfect; that every act of transmission shall be performed as a service to a felt need, and in such a manner that attention is called to existing defects and to the possibilities of improvement.

5. Standards.

Are the proposed standards of judgment based on determination of the nature of the students themselves and not upon their achievements?

This means that an appraisal of the results of the educational process must ask and answer the questions:

a. With what enduring purposes has the individual identified himself? (Vision.)
b. What efforts does he make to achieve his purposes? (Self-direction.)
c. By what standards does he judge his achievement? (Self-appraisal.)
d. In what spirit does he encounter obstacles, surmount difficulties, endure disaster, etc.? (Self-control.)
e. To what degree is he aware of, able to enter into, and able to utilize the purposes and powers of others? (Cooperation.)

For instance, four simple tests of any classroom procedure are: 1. Who sets the lesson? 2. Who marks results? 3. Who keeps order? 4. Who helps the failures?

If the answer is invariably "the teacher," one knows at once that the procedure is not valid in terms of the reasoning on which my philosophy is based.

By way of summary, I wish to discuss one other aspect of appraisal. It is, of course, evident on reflection that all forms of education integrate personality to some degree, and that all forms to some degree result in the acquisition of knowledge and skill. Perhaps it is even true that all philosophies have at their core the same aim, character. But it is not true, as Horn has recently suggested, that it makes little difference what method is followed, the result is about the same? Some forces integrate and some disintegrate. Some situations are favorable for integration and some are not. The important research problem of the immediate future is to measure very precisely both the degree of integration and the amount of acquisition which takes place under radically different forms of educational procedure, that we may select those methods and those procedures which are most valid in terms of the philosophy we have adopted. It may even be that such results will influence many to adopt different methods and different goals. But for myself, my choice of goals is independent of the results of such researches. The only event which can effect any change in my philosophy will be reinterpretation of the cosmic process. Until that event happens, the significant criteria for the appraisal of the validity of educational philosophies will be those derived from my conception of how personalities are integrated.

ADAPTING THE SCHOOL PROGRAM TO THE SLOW-LEARNING CHILD[1]

ELISABETH LONG
Child Study Department, Rochester, New York

Why adapt the school program to any child? I remember an incident of my days as kindergartner. My co-worker was a charming person and an excellent musician, but she did not believe in adapting anything to a child. One day she played a march to which neither the children nor I could keep time. I requested the march of the previous day, which had swung the pupils into step from sheer inability to escape the rhythm. Courteously but firmly she said, "This is four-part time. They should be able to march to it." For such an attitude this discussion has no point, for I'm suggesting that adapting to the children is a case of Mahomet and the mountain. If there is any one fact that compulsory education has forced upon our attention, it is the fact of individual differences in the learning ability of children. Until we can control the ancestry and environment of school children, I fear any effective education, even in the three R's, will have to proceed through the adaptation of the school program to their differences.

But there is another and perhaps more important aspect to this need for adaptation. In these days of emphasis on preventive measures, education cannot escape its responsibility to prevent. The whole problem of mental hygiene is bound up in this matter of school program adaptation. Whether or not we accept the responsibility of being our brother's keeper, we cannot evade the fact that as teachers we become our pupils' keepers long after they have left school. Permanently wrong habits of work, emotional difficulties, personality problems, social maladjustments—any or all may be started and nurtured by a school procedure which has failed to adapt to the learning characteristics of the pupils.

Finally, adaptation is the only method of equating opportunity. With the impossibility of equating native equipment or environment, it is the only means the school can use. Surely nothing less than meeting the need of every child can be the goal of compulsory education. It sometimes seems as though we force each child to "take" education and then punish him if the dose we have provided doesn't agree but makes him temperamentally or emotionally ill.

Of the many considerations which must determine the ways and means of educational adaptation, the most far-reaching, as has already been intimated, has to do with variations in the learning capacity of the children. All of us who have tried to teach children realize the enormous differences in them, in regard to the ease and rapidity with which they learn. Before any effective plan of adaptation to meet this condition could be formulated, however, it was necessary to demonstrate objectively the existence of this variation, and to substitute for our subjective knowledge definite determination of relative learning capacity.

The intelligence test is, of course, the

[1] A paper read before the Special Education Section of the New York State Teachers' Association at Rochester, November, 1928.

tool which has served these two purposes. Needless to say, no one considers intelligence the only factor operating for learning success. Attendance, effort, personality, and other conditions will always affect scholarship. Intelligence does, however, seem to be the most important single factor in the psychology of learning. In fact, it is often defined in terms of learning ability. This assumption, namely, that variation in intellectual capacity is a primary factor in determining the "what" and "how" of children's learning, is therefore basic in any psychologically sound plan for individual education. If in addition we assume that intelligence can be measured with sufficient reliability and validity to permit a fairly accurate prognosis of learning capacity for school work, we can give an objective definition of the slow learners and work out a practical plan for educational adjustment to them.

On this basis, then, other things being equal, we are thinking of the slow learners as those whose mental ages lag behind their chronological ages to such a degree that the ratio or intelligence quotient falls below 90. From 20 to 25 % of our school population are estimated to be in this group if we include those cared for in special classes. Such a proportion as this surely has a right to the school adjustments necessary to meet their learning needs, especially when we consider how peculiarly susceptible to personality defects this group becomes under ordinary school procedure with its emphasis on the abstract. Failure, discouragement, antagonistic attitudes, sense of inferiority, confused ideas, are all the logical outgrowth of attempting work that isn't understood and of being expected to progress at too rapid a rate even when the work can be comprehended. The dull pupils are constantly being accused of "poor conduct," "inclinations to truancy," "willful disobedience," "poor attitude," "wastefulness," "lack of persistence," "destructiveness," "lack of coöperation," etc. Until educational procedures have been adjusted to meet the needs and interests of these children, however, it is most unfair to assume that these traits are inherent rather than acquired from an unfavorable environment. Until we develop and apply some means of providing, first, "psychologically correct methods of teaching these children"; second, "standards of achievement that shall fit their mental rather than their chronological age levels"; and, third, "courses of study definitely adapted to their needs," we do not know how successful an adjustment the slow learners might make, both in school and out.

How can the school, then, plan to meet the needs of these children? I want to call attention this morning to three essential steps. First, the recognition by the school administrators and teachers of the problem itself and of the individuals who compose it in each school organization; second, the grouping of the children on the basis of ability to make possible the required adaptation in methods, progress rate, and curriculum; and, third, the study of the common learning characteristics of slow learners to guide in making the adaptations with, also, experimentation to check and select the effective ones.

Let us consider these points in order. First, the recognition of the problem itself. In spite of the fact that much of the pioneer work in the testing of mentally defective children demonstrated that they were merely deviates at the extreme end of the curve of intelligence, many people still think in terms of boxes—one for normal and one for subnormal. They fail to comprehend that there are mentally retarded children all the way from the special class group up to the normal group. Members of the Child Study Department

constantly have such children from all grades sent to them for individual study. Almost always these children are reported as behavior as well as educational problems —stubborn, rebellious transgressors. When the examiner cannot by the most generous interpretations of borderline conditions justify placement in special class, the tests as well as her judgment are frequently discredited. She thoroughly realizes that it is the problem of these dull normal and borderline children which is urgent and unmet at the present time. What is needed is selecting and planning for these children in advance instead of waiting to let them select themselves by becoming school nuisances. As already intimated, the intelligence tests with all their defects serve our need here. When used with insight, they do select the slow, average, and superior learners with a surprising degree of accuracy.

Since we can demonstrate the existence of the problem and select the children who compose it, should we not make thoughtful, patient, experimental attempts to meet it? My seven years' experience of testing and observing these slow learners has practically convinced me that they would go further, even in the three R's, with less stress and strain to all concerned, if the subject matter were motivated at their mental level and the teaching adapted to their specific needs and abilities. I think one question will show that your experience corroborates mine in this. Of two of your children of the same chronological and mental ages, which will learn reading more easily, the one who has had several terms of failure in the regular organization or the one with no background of frustrated attempts to learn reading?

Now, of course, no problem has reached this degree of formulation without having set in motion attempts to meet it. The organization of ability groups is a step in this direction—a logical one, I think. Such teaching units are perhaps more logical than those based on subject matter preparation, for no amount of effort will enable a teacher to use psychologically correct methods for all children where the ability range is wide, but where the range is narrow, the use of such methods can, within limits, equate inequalities in subject matter knowledge and skills.

In Rochester, the Child Study Department has been working for some time along the lines of ability grouping and of adequate means for selecting the group members. In schools which so desire, a testing program when children enter first grade provides for the selection of the slow learners and for a suggested organization plan that would permit adaptation of work to meet their needs. This plan must necessarily vary with conditions, such as the extent of the problem, the size of the school, etc. In large schools where the proportion of slow learners is also large, the formation of separate pre-primary and slow-moving groups is possible.

The pre-primary is designed to meet the needs of children who have outgrown kindergarten (perfectly possible because the content of kindergarten work is designed to fit the need of the average four- to six-year-old child), but who are not yet ready to learn and apply the technique of reading. Most workers are feeling that a mental age of six is a minimum essential for learning to read, if we are to avoid the erroneous impressions and bad reading habits due to mental immaturity which are so difficult to eradicate later. On this basis, no child whose intelligence quotient is below 92 or 93 is going to be mentally ready when six years of age chronologically for regular first grade work as it is conducted for those who are mentally ready. There is need, moreover, not only of deferring formal reading with these children,

but also for preliminary work in experiences basic to reading. They need a pre-reading background developed through concrete experience, pictures, language work, dramatization, etc. The pre-primary thus provides a place where these slow learners can adjust on their own level while maturing mentally. This group also provides a place for the child who is too foreign for the first grade work and for those who need physical correction or emotional re-education and development before attempting that work. At the end of the term, after further study and retesting, some of these children will go to the regular 1B, some to slow-moving first grade, and a few may require another term in pre-primary.

The slow-moving groups designated as B_x B_y, and A_y have been formed in the first, third, and fifth grades. The purpose of such groups is twofold—first, to give the slow learners three terms instead of two for every other year's work and, second, to permit the necessary subject matter and method adaptations. At the fifth and sixth grade levels, there are also opportunity groups, but I shall not discuss their function here.

This plan of organization as described can only be used where numbers permit. This fact does not justify, however, ignoring the slow learners in the smaller schools merely because the organization there is more difficult to plan. In each case, the particular situation determines the plan which must be worked out. In some schools the pre-primary group can best be adjusted in connection with the kindergarten; in some, the pre-primary and the $1B_x$ and the $1B_y$ and $1A_y$ are placed together. In others, a mixed group including pre-primary, $1B_{x-y}$ and $1A_y$ is the best solution. Of course, such groups need to be kept small enough to enable the teacher to serve the variety of subject matter needed.

Such a plan of organization provides without difficulty for the first purpose mentioned—that is, lengthened time. But the second purpose—adapted teaching—is a far more difficult matter, yet it is essential if homogeneous grouping is to function and not defeat its own purpose. While it is evident that much of the teaching program that suits the needs of the large 50% of average learners must be modified in many ways to meet the needs of the dull group, still the members of this group have been recognized and studied for such a comparatively short time that we are only beginning to realize what the specific learning characteristics are in which they differ from the average group. It is, of course, only through careful study and experimentation that we can develop an adequate program. No one educational panacea, such as longer school sessions, patented methods of instruction, lauded remedial measures, will serve here. Course of study differentiation is what is required and the idea is a matter of such recent thought that the procedure for building such courses has had very little discussion or consideration.

The only people who have any real opportunity to comprehend the problem practically are those who teach and those who test these slow learners. Its solution must come, then, through the combined efforts of the practical teacher with a theoretical bent, and the theoretical psychologist with a practical bent. In Detroit, these two groups have been working together for some time. As a result of their labor, Dr. Harry J. Baker has recently published a book that discusses the characteristic learning differences of bright and dull pupils. Under subject matter heads, he applies these facts to school instruction. Five hundred teachers have contributed to this analysis. The unanimity of opinion among the teachers working quite independently

of each other is arresting and significant; so also is the agreement between teachers' conclusions and those of the psychological examiners. Dr. Baker feels that this consensus of opinion adds greatly to the validity of the results.

Because my own conclusions, developed through testing and observing these children, so largely coincide with those of the Detroit group, I am drawing generously on the material in Dr. Baker's book in considering my next point. It will be interesting to know the reactions of the special education group to this analysis and its application, because the extremity of your need has forced you to work out this problem for yourselves.

What are, then, the learning characteristics of the dull pupil to which subject matter, methods of instruction, and standards of attainment must be adapted for effective education? I shall state some of the most important ones with such illustrations and applications as there is time for, but I shall make no attempt to put them in order of importance or to define in terms of the degree of mental retardation of the pupils the "moreness" or "lessness" of the need for application.

It is difficult to sort out and discuss separate characteristics because of the interrelations, the mention of one involving many of the others. I shall attempt, therefore, first, to summarize the main characteristics briefly, enlarging later on their implications through statements of specific principles, through application to subject matter and method, and through illustrations.

The dull learners are slow in forming associations, especially between words and ideas. In other words, they require concrete expression and have difficulty in using symbols. Acquiring the symbols of learning, consequently, is a "real mental challenge to the dull mind," and the application of these symbols as tools for larger meanings is correspondingly difficult. Principles as well as facts have to be kept more or less concrete. "It is the physical and mechanical aspects rather than the significance of situations which impress them. They are not only slow in making associations, but unable to call up and apply a multiplicity of associations or to coördinate two or more mental functions." This fact makes complex mental problems beyond them. They do not grasp long or complicated problems or even statements. "They make simple mental associations and require simplicity in the words which symbolize them."

The dull child lacks mental alertness and initiative. He lacks ability to analyze and to reason and his judgment is poor. He is unable to set and realize his own standards in workmanship. He fails to observe closely and accurately and to recognize the familiar elements in new situations; he does not detect his own errors. He learns slowly and forgets quickly, and his muscular coördinations and motor skill are inferior.

These are some of the attributes of the dull child. What are the implications for teaching procedure? First, the use of very simple language in content and form by teachers and textbooks. I suspect an X-ray of the minds of these dull pupils would leave us amazed and aghast at the confused, erroneous impressions caused by their failure to grasp the meaning of entire sentences.

The second implication is even more evident than the first—the need for short, simple, concrete, and immediately motivated units of work. In reading, for example, right from the first, the lessons need motivation on the child's level. In manual training and allied subjects, all involved projects should be broken up into simple motivated units. Even these need concrete

presentation with demonstration and example.

Third, there is need of definite training in the application of the technique taught and the avoidance of techniques whose application is too difficult. In arithmetic, combinations and operations should be used right from the start in concrete applications to practical situations so as to give them definite meaning. Educational short cuts are not for the slow learner. They are likely to hinder rather than to help. If the child does not understand them, they add to his confusion. If he can learn them, he is likely to be incapable of applying them. This fact needs to be kept in mind with relation to spelling rules and devices for teaching arithmetic and reading. All such devices should be scrutinized from the standpoint—to what extent can the child actually use them with profit? The value of phonics for self-help is dependent on the mental capacity of the child. With dull learners, their use to develop clear enunciation, initial sound, discrimination, and other simple needs may be helpful, but involved application to new words should not be expected or planned for.

The next implication is the need of thorough teaching with emphasis on correct habit formation. A little useful subject matter thoroughly understood and a few correct attitudes and habits of work permanently fixed—that is, mastering a little—is worth any amount of haphazard learning. Because of his lack in ability to organize, such learning may be a real detriment to the dull child, for his stock in trade must be in the form of definite habits. This principle applies to every subject, but is especially important in manual training, for these children will largely become manual workers. They need habit forming training in the care of tools as well as in their use. With dull children, standards of good workmanship are not obtained on the basis of precept upon precept but on the basis of habit upon habit, beginning with the very simplest. Such a development requires never-lagging watchfulness on the part of the teacher over process as well as product. There must also be definite planning to habituate the necessary integration of the simple habits into more elaborate technique. Even facts and principles must be taught through definitely planned concrete habit formation.

Habit formation leads us right into the necessity for drill. Since he requires so much and such constant repetition, it is fortunate that the dull child enjoys drill and gets a sense of power from it. Drills, to be effective, should be short enough not to fatigue, should be frequent to prevent forgetting, and should be well supervised to keep error from creeping in. They should also be properly motivated because permanently effective habits can only be formed with the coöperation and right emotional attitude of the child. (I should like to emphasize that last statement. Nothing would revolutionize work with children more than the realization that a crucial element lies in the feeling roused in connection with the act).

Another consideration follows the idea of habit formation as logically as did the matter of drill, namely, that nothing can be taken for granted or left to chance. Much that seems perfectly obvious to the teacher must be explained and demonstrated. All connections have to be built in and the work must be planned accordingly. (Think how the average or bright child would be bored by such teaching.) Just in the matter of language forms and vocabulary the dull child must be taught what the average child gets unconsciously.

It is hard to realize what minute details have to be planned for. Perhaps an illustration or two will point the moral better

than any amount of didactic discussion. I was trying to find out the town in Pennsylvania from which a ten-year-old boy had just moved to Rochester. In every way possible I tried to inveigle him into recalling the town's name. For each persuasive effort, he had one reply, "Pennsylvania." Finally I asked simply but with much dramatic detail the name on letters that came through the Post Office. His face lit up. At last he could accommodate me. He said, "I know—'P—A.'"

In establishing rapport with a 13-year-old girl, I referred to the vacation on the preceding day and inquired about George Washington. Carmella knew he was "president of his country," and finally concluded his country was the United States. Beginning to doubt the content of these verbal responses, I asked, "Where is the United States?" I was a bit startled to learn that it was in the northeastern part of Canada. Such incidents are not the fault of the child or the teacher, but simply the result of faulty conditions. These children had been in groups of average learners and the teacher could not spend precious moments explaining what was obvious to the majority of the group.

In working with the dull child we must plan to train him to know when he is right and when he is wrong. Because of his mental make-up, he is frequently unable to detect his own errors. Here, again, talking and precepts are the least helpful attack from the practical point of view of correction as well as from the possible danger of increasing the child's discouragement and lack of self-respect. Again, we must be concrete and adjust the level of difficulty, setting simple situations that will enable him to check his own errors as much as he can. Then we must patiently build in the habit of doing so by requiring self-correction as part of his work whenever possible. Devices necessitating self-checking can be used but cannot be depended upon without some oversight. The impact of unadapted methods on native characteristics makes the dull child an inveterate and confirmed guesser, but training could offset this somewhat. A dull child should receive approval and praise for knowing that he doesn't know. It is then the teacher's responsibility to see that he has another chance to learn.

While the dominant social characteristics of the dull child are more or less the outgrowth of his mental handicaps, his limited power of intellectual comprehension of situations and his lack of fertile and accurate imagination, they also necessitate adaptation. "Immediate and selfish interests dominate dull minds in powerful ways." These children have narrow individualistic points of view and seem less able than average children to control their personal feeling. They also apparently find it more difficult to subordinate themselves to the larger interests of the group. Because the dull learners are less intelligent socially, they are doubly in need of an adapted program to develop more desirable social traits as well as to prevent the aggravation of the anti-social ones. The same emphasis on the concrete, definite, simple, and immediately motivated projects in habit formation are again applicable. Social service, assembly work, health education, social studies can all be utilized for the purpose of social development. These children love to perform, no matter how poorly, and simple plays and demonstrations that are kept concrete and colorful would tend to strengthen the social bonds. Coöperative games are excellent but must not be too involved for their mental grasp. Social study material can be used, but with much practical illustration and first-hand observation and personal experience. The teacher will need also to be ingenious in building meaningful entities out of the

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fragmentary units by means of which such material must necessarily be taught. Simple club activities and work on teacher supervised committees are also helpful. With social adjustment such a vital and important factor in life, certainly this aspect of the dull child's education should be given careful and experimental study.

One of the greatest handicaps in the teaching of the dull child at present is the lack of suitable material. The lag of mental behind chronological age makes adjustment to two levels necessary, the social and interest level of the chronological age and the difficulty or technique level of the mental age. In reading, for example, the boy interested in cowboys and Indians must learn to read on material designed for six-year-olds, singing lullabies, etc. It is really pitiful to think what incongruous material the dull adolescent of thirteen has to read because of his mental age level of technique. It is not surprising that these pupils do not have a more spontaneous interest in cultural material. Until literature is brought to their ability level, we cannot expect their meager lives to be broadened and enriched by it. Perhaps, as Dr. Baker suggests, their interest in sensational cowboy, bandit material is partly due to its being written in words of one syllable.

For fear, in my attempt to give subject matter applications, I have buried the suggested basic learning needs of these children, may I just recapitulate briefly some of these major necessities in making education effective for dull minds?

1. Use of simple vocabulary and simple language forms with constant reference to first-hand experience and visual devices to clarify meaning and increase word knowledge.

2. Short, simple, concrete units of work adequately motivated on the interest level of the pupils. (Content on chronological age level of social interests—technique on mental age level.)

3. Carefully supervised habit formation along every line in both process and application. Through this means build the child's standards of work.

   a. Use much carefully planned drill to fix technique and facts with a balancing of training in application.

   b. Leave nothing to chance—the most obvious of associations must be planned for and checked.

4. Standards of achievement determined by the mental capacity and traits of the learner—a little thoroughly learned, enjoyed, and used, rather than much attempted with resulting confusion.

5. Situations to develop more careful observation and accuracy.

6. Devices to help the child check his own knowledge and his lacks and needs.

7. A deliberately planned program on the child's mental level for developing right social attitudes and habits, and, above all,

8. A consciousness that the wrong emotional attitude developing side by side with the right technical skill will nullify the most carefully planned work and effort.

This array of educational needs is not at all an arraignment of the slow learners. It is a challenge to you and to me and to all those responsible for their education. We must accept the raw material as it is and build upon the abilities as they exist. We must forget temporarily the standards of achievement set up for the more capable children and measure our results in terms of the improved habits and attitudes in these children as they are. If we do this, the task of teaching dull pupils should be no more difficult than that of teaching other groups. The teacher must, of course, be analytical, resourceful, and patient, but what teacher should not be? These children have special learning needs. The methods successfully built up for the average group have not succeeded. What less can we do, then, than build a procedure based on an analysis of their needs and try its effectiveness?

Dr. Baker feels that the learning problem of the special class group is very closely related to the problem of the dull group. In fact, there is quite a bit of overlapping in the personnel of these groups at the upper levels of the former and the lower levels of the latter, due to the personality, emotional and mechanical factors which affect achievement and influence special class placement. He says that if an even balance were struck between the psychological traits of the subnormal and the normal or average learner, the characteristics of the dull pupil would probably be quite closely described, and he calls the subnormal group the "slow motion pictures of the educational world."

The entire inadequacy for your group of the instructional procedures developed for the average learner has forced you, the special class teachers, by the very necessities of your work, to become pioneers in adapting that work to individual differences in learning capacity. It would seem, therefore, that you have a responsibility to assume and a contribution to make to the cause of the slow learner of whatever degree. In closing, consequently, I would suggest briefly some of the ways in which this group needs your effort and example. If, in my attempt to be brief, I should sound critical and didactic, please realize that a spirit of criticism is farthest from my thought. Because of my very genuine admiration and appreciation of what I have seen in special class groups, I am challenging you to prove your faith and spread it concerning, first, subject matter and method, and, second, concerning the attitude toward the dull learners and toward the work of teaching them.

The elaboration of the characteristics of dull learners has practically taken care of the first point. The need of textbooks presenting the two levels of content and technique, the need for simply written literature (such literature has been written and by masters, but it needs to be located and put in usable form); the need for practical methods for putting over subject matter, for building desirable attitudes and habits, for developing social ideals and actions—all this must come from capable teachers who are interested in studying and meeting the problem.

The other part of the appeal is perhaps more important and correspondingly less easy to express. It must be apparent that I am a convinced believer in wisely planned and carefully checked homogeneous ability grouping. I believe in it as our best means of equating learning opportunity. I believe in it because I think it will unmask other individual differences needing adjustment which have been overshadowed by the ability mixture. I believe in it because I see no other adequate means for preventing wrong habits and attitudes —in the case of the slow learners, discouragement, sense of failure, and inferiority with their train of personality ills. I believe in it because I feel that wisely used it can be the means of giving the slow learner his rightful share of success in school and in life through his adequate adjustment on his own level to them.

But such grouping is only a means, not an end. Unless subject matter, methods, and standards of attainment can be differentiated to overcome educational and emotional blocking, homogeneous grouping cannot function. Unless, moreover, the attitude of adults and other children toward these groups, including the special class ones, is understanding and coöperative, homogeneous grouping may defeat its own most important purpose. When teachers use placements in such groups, slow-moving or special class, as an occasion for regret or pity, or as a threat to improve work or conduct, when children look down upon and taunt the members, when parents pun-

ish a child so placed in angry and shamed resentment, I feel—well, I feel just as you would feel if these placements were your work as they are mine. I ask myself what shall it profit a child to learn to read, to spell, to figure better if once more his self-respect is assailed? As a psychological examiner, I think I have a right to speak feelingly about this matter.

But I am convinced that these things need not be, for I know places where they do not exist. Children and parents reflect the attitude of the school. Selling any special group to the children not in it would not be difficult if all teachers and principals would treat both the group and the child placed in it with respect and interest, and drop, occasionally and casually, appreciative and honestly admiring remarks about such groups. It is not an attitude of sentimental pity that is needed, but an attitude of respect and interested encouragement. That such children can have this opportunity is really a matter for congratulation. When other children see a group acting like self-respecting learners, enjoying their work and having rather enviable activities, they will accept it with little comment or criticism except perhaps to apply for admission. I've known special classes which dull normal children have begged to enter. I even knew one group of dull learners which proved so attractive to a very bright child that she deliberately failed her school work in order to achieve placement. The connection of an intelligence test rating and assignment to the group being unknown, she failed to take the necessary precaution of doing poorly on that test also, and thus defeated her plan.

I suppose every deviation from the traditional beaten path must be sold to the wisely conservative treaders of that path. Every movement for better school adaptations from kindergarten to junior high has been under this necessity, so why should the effort to adapt school procedure to variations in learning ability escape? As I have already suggested, there is no group to whom we can more logically turn to pave the way for this movement than to the special education group with their understanding and background. Now that special class work has passed its experimental stage, its workers should come forward and again be pacemakers in the educational field. May I make some tentative suggestions as to a few of the ways and means through which you might make this needed contribution?

In the first place, you need to sell your own work to the schools. I dare to say this because I learned it by watching special class teachers do this in the schools. I do not mean sell your classes as places for school problems, but sell them as groups of contented, happy, willing, and self-respecting workers. Naturally, teachers come to think about the special class group in terms of the children in their grades proposed for placement there. As you know, these children are usually behavior problems as well as retarded learners. (Somehow docility seems to offset stupidity with the average teacher. I suppose we are all prone to judge our human contacts on the basis of their personality effect on us.) Now, "stupid behavior problems" forms anything but a rose-colored pair of spectacles through which to view a class. I am wondering to what extent you as teachers of these classes have given these other teachers a different point of view through concrete demonstration. Has there ever been a consistent plan carefully worked out and carried through for the making of an extensive and patient attempt to create in the principals and teachers of the schools the attitude toward your groups you feel would be helpful? Note, I say "create in," not instruct, for no group has been

more thoroughly taught and uses less than we teachers the precept that "actions speak louder than words."

We are mostly believers in projects. At any rate, we use the term frequently. Why not take some such project in educational psychology and learn from experience the real educational content of the word? If you did assume such an undertaking, I venture to suggest that in its evolution you would be asking yourselves some of the following questions:

Do I make my group feel a part of the larger school group by giving them as much typical school work as they can comprehend and, while adapting my procedures to their learning characteristics and level, by using as far as possible the common school terminology?

Do I see to it that the children's best work and behavior is seen and appreciated by their former teachers and companions?

Do I provide for their taking part in assemblies and for their making contributions individually and collectively to the general school activities?

Do I give them definite training in responsibility, not through talking but through the requirements of concrete situations adjusted to their mental level?

Do I feel sorry for the children in my group or do I treat them on their own level with the respect due another personality?

Do I feel the children can't do much anyway, or do I act as though I felt their effort worth while, help them to accomplish things, and force them to live up to their best by refusing to accept less in either effort or product?

Do I decide everything for them or do I create situations in which they can give valid opinions, and then treat those opinions with respect?

Above all, how do I speak of these children before others? As we think in our hearts about them, so do we refer to them.

Such is my confidence in the special education group that I am sure your wholehearted interest and effort could bring about a fruitful consideration of the slow learner and his educational needs. If an attitude of understanding and respect for these children on the part of all those concerned in their education could be built up, the problem of the slow learner would disappear in his own secure and effective opportunity.

WAYS AND MEANS OF HELPING TEACHERS TO ADAPT THEIR INSTRUCTION TO INDIVIDUAL DIFFERENCES

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The term "individual differences" has found its place in educational terminology and that it should be recognized is accepted by everyone—there is no argument on that. But the questions remain open in a large percentage of our high schools. What are we going to do about it? How are we going to meet these needs which we know exist? How can the teacher with a heavy load solve the problem that confronts her? And how can the supervisor best render timely assistance in this matter?

That the needs are too important to adopt a *laissez-faire* policy, all educators are beginning to realize. Formerly the idea prevailed that all children were alike and gradually our schools became organized around this point of view. Uniformity became the ideal. But the fallacy of such ideas became apparent and it was seen that the more capable were rarely worked to their capacity while the slow pupils were sacrificed to the system. We know now that upon the able or intelligent people depends the progress of our civilization and these must be educated to the fullest extent; and that the problems of society are greater if we do nothing for these failures of the schoolroom. Equal opportunity for all must cease to mean the same curriculum for all. The test of our educational program must mean the excellence of training provided for each individual child with reference to what he can do best. Teachers must be trained to recognize the important aspects of the situation.

Some reasons why they have failed to see this problem have been the overcrowded conditions of the school, the large amount of textbook teaching, and the indifference to objectives. The teachers were ignorant and poorly trained. The increase in enrollment has brought to light more and more differences. Psychologists have centered their attention on ways of measurement and with this multitude of new tests the teachers have been overwhelmed.

Other problems that have tended to call the attention of administrators to the failure to provide for the individual have been (1) the increasing number of failures, (2) the passiveness of the high school pupil, (3) lack of initiative and self-direction, (4) no interest in originality, and (5) the growing tendency to lower standards. These problems have been responsible for a careful survey of the field of differences and more or less successful experimentation in attempting to improve conditions.

The first duty of the teacher and supervisor is to study the field and to diagnose in a systematic way these differences in the pupil. Many suggestions as to the range of differences to be studied have been offered. Nutt[1] lists eight varieties, namely: (1) difference in environment, (2) maturity, (3) anatomical structure, (4) sex, (5) ability, (6) types of minds, (7) types of imagery, and (8) types of thinking.

[1] Nutt, H. W., *The Principles of Teaching High School Pupils*, Chap. 5.

The study of the environment includes the pupil's home life, religious life, and the community. Every community has its own character. The pupil coming from a good home with educated parents has a better skill in using English and a wider range of experiences than the pupil from an illiterate home or a foreign neighborhood. The school may have a whole class that must be dealt with by trained experts if good citizenship is to be the result. Textbooks and other materials must be adapted to the environment.

The matter of differences in maturity has led to the formation of junior high schools as one means of solving the difficulties it presents. It has involved the rapid promotion idea that prevails in some schools. It needs further study before it can be settled what shall be done.

Physical structure and sex both have a bearing on the child's progress in school. Medical knowledge and investigations in psychology have added much to the elucidation of this subject. The brightness and dullness or ability of pupils is easy enough to test in a general way. The other three of Nutt's list have considerable bearing on choice of subject matter and the psychological processes of the learner. These differences make it necessary to develop a technique of study in the school.

A number of procedures in studying the pupil have been developed in the past few years. Anderson, Barr, and Bush [2] give a list of items to note about the pupil.

1. Note the pupil's general intelligence or ability to learn.
2. Note evidence of individual levels of achievements and knowledge of subject matter (educational tests and grades).
3. Note special learning abilities such as command of English, general reading abilities, ability to use tools of learning readily.
4. Note previous experience with subject matter in the school and the home environments.
5. Note special language difficulties, such as appear in the foreign community.
6. Note home conditions and home factors conditioning learning.
7. Note items of health, such as absences because of illness, physical defects, etc.

William A. McCall [3] suggests the following study of pupils:

1. Introspection or self-study on part of pupils.
2. Observation of normal, everyday classroom work of pupils.
3. Have the pupils trace the process of thinking orally. (Uhl used this in locating differences in addition and subtraction.)
4. Analysis of test results.
5. Secure the developmental history.
6. Contrast the methods of work of the good and poor pupils.
7. The complete psychological examination.

Still another study which has the advantage of careful analysis as to means and technique is Waples' "Easy ways to diagnose pupils." [4] He divides these into three parts:

First, special learning abilities;

Second, personal history and experience with subject matter which you teach, and

Third, present interests related to your subject.

These have been planned in such a way that the supervisor could use them in carrying out tests as means for execution are included. Some of these plans are simple enough to be done easily by the teacher without expense or much trouble.

The supervisor has an important part in assisting the teacher with the diagnosis of the pupil. He should have in his office samples of charts and tests, references in professional literature as to their use and

[2] Anderson, Barr, and Bush, *Visiting the Teacher at Work*, Chap. 2.
[3] McCall, W. A., *How to Measure in Education*, pp. 88-111.
[4] Waples, Douglas, *Procedures in High School Teaching*, pp. 48-54.

value. In many cases, unless the teacher has had previous training in giving tests, these should be conducted by the supervisor himself. One of the duties of the supervisor is to take some teacher or teachers and train them in the technique of administering educational and intelligence tests. All of the teachers perhaps should assist in scoring their own tests. The results should be tabulated and interpreted by the supervisor. A private conference with each teacher or with a small group of teachers which deals with the data of the tests should follow the tabulation. This conference is very important, for it is here that much can be done in suggesting means of overcoming weaknesses shown in teaching and treatment for the individual differences of the pupils.

The variations need to be studied carefully from the point of view of causes. An illustration of the misunderstanding which may arise when a teacher does not study causation is shown in the following incident. A young man, inexperienced, reported to the inspector that all of his pupils were morons, hopelessly dull, and he had therefore graded two-thirds of them as failures. The inspector dropped into a class in literature the following day. Without any preliminaries or explanation the teacher said, "We will read Sandburg's poem, 'Chicago,' today." Then he read aloud the entire poem in a lifeless tone. When he had finished he said, "What do you think about that?". He called various names and each responded, "I don't know." He turned to the inspector and said, "It doesn't catch in very far." A little investigation on the part of the inspector showed that none of the children had ever been in a city of more than 10,000 and that it was lack of ideas that made them listless on the subject of "Chicago." Of course, most teachers would know better than this one the difficulties involved, but still many fail to see through their difficulties.

After having diagnosed the variations and differences, the next step is to adapt the instruction to fit the needs. There are several systems that have been formed as an attempt to solve problems of the variations. Although some of these would fall chiefly under the administrator's duties, yet the supervisor should be the one to prepare the teachers and get them ready to work the system out with understanding and appreciation. The most important of these systems will be discussed briefly.

1. Homogeneous grouping has been tried by many schools. The basis for classification has usually been on some form of intelligence testing combined with the pupil's school marks. The classes or sections were divided into from two to five groups. Many schools use three groups: "Excellent" students, "Medium" students and "Inferior" students. The section can progress as fast as their ability will permit. The bright sections will have their courses enriched and be introduced to many experiences. They will not be compelled to listen to repeated reteachings. The bright pupils will have their initiative developed to a higher degree. The dull pupil may have the advantages of individual instruction. The chief disadvantages[5] are (1) the ambitious pupil may overwork; (2) the slow one needs some bright ones to speed him up; (3) the textbooks are not suitable; (4) the bright pupils graduate too young; (5) stigma attaches itself to slow group; (6) teachers overestimate the work of the better students of slow group.

The supervisor should definitely supervise the grouping in this plan and should base the grouping on as many factors as possible. Conferences with the teachers will be necessary to get their coöperation

[5] Douglass, Harl O., *Modern Methods of High School Teaching.*

and opinions. The teachers having slow sections need special attention in adapting their subject matter, especially as the teachers themselves have a tendency to become discouraged when dealing with this type of pupil. The supervisor must show the teacher that the slow pupils need more drill, more review, more careful assignments, and new ways of appealing to interest. This plan cannot be used successfully in the small high school.

2. "Flexible Assignment System"[6] was devised by the University of Wisconsin High School under the direction of H. L. Miller. It is sometimes called the Challenge Plan. A challenge is issued to each class. It has three parts or blocks. All students are required to complete the minimum assignment in order to receive credit at all. To get *Good,* he must complete the minimum and the average assignment. To get *Excellent,* the pupil is required to pass all three assignments. These assignments should be in ascending order of difficulty. The advocates of this plan declare that nearly all pupils catch the contagion of mastery and that school marks gain new significance.

The teachers need to coöperate in adopting this plan. The supervisor could render valuable assistance in helping them get the new technique required. It would take some time to adjust pupils and teachers. The teachers should be thoroughly converted to the idea before trying to start it.

3. Many schools are meeting this problem of individual differences through supervising the study (or learning process) of the pupils. The subject of supervised study is obviously undergoing important changes at present. It once meant the activities of a teacher who sat in a room where children were corralled while they gave more or less attention to a textbook. Now it has come to mean the directing of the entire learning process which may be done in class or out as the case may warrant. The most satisfactory plan has been to use about sixty minutes, although longer and shorter periods have been tried and found successful in various high schools. The objectives need to be very definite, the assignment must be made in specific study units if supervised study is to be a success. The problem attack is one of the best types of teaching in supervised study. The recitation may be of varying length and should be primarily a discussion of topics or problems met with in the study. The difficulties may in this way be ironed out. The bright pupil is taken care of as well as the dull in this method. Supervised study seems to be rather hard to install in a school because few teachers understand the real psychology and purpose of it. The supervisor would have a task in training and guiding the teachers in its technique, in watchful oversight and frequent conferences with the teachers. It is a system which is very valuable when used as it should be, but one that may be abused easily. The function of the teacher, however, is quite definite. Ferriss[7] gives some suggestions which may be applied to the teacher's work.

1. The instructor should act as a general manager of the class activities, as a director and guide.
2. He should make, previous to the study period, a careful assignment, setting forth the specific objectives for the work, the problems, the topics, etc., and sources of materials.
3. See that the materials needed are available.
4. See that the physical environment is conducive to work.
5. See that each pupil understands clearly what his task is.

[6] Miller, H. L., *Directing Study.*
[7] Ferriss, E. N., *Secondary Education in Country and Village,* p. 262.

6. Encourage each pupil to utilize his time and energy fully, help him to avoid wasteful methods of work, and guide him to more effective ones.
7. Give each pupil assistance when needed, but encourage initiative and the assumption of self-responsibility by not giving too much help.
8. Limit the amount of trial and error by suggesting at appropriate time ways of overcoming difficulties apparently insurmountable.
9. Give instruction as needed in methods of study, use of reference books and other sources, taking of notes.
10. If needed, when taking up for the first time a new phase of work, go through the operation required.
11. Observe the various pupils at work to discover their interests, aptitudes, weaknesses, and strengths as a basis for future guidance.

The supervisor should have all of these points in mind when training teachers in the technique.

4. In Morrison's[8] system of "teach—test—diagnose—reteach" until mastery is obtained or it is definitely ascertained that the pupil is a non-learner, the problem of individual differences would be automatically provided for. It will take much education of the public and the teacher before this can become universal, although the trueness of the underlying principle must be realized.

5. Some of the schools advocate an adjustment of recitations to pupil needs. In some cases this means that the questions will be graded into easy, average and difficult types which are given to the pupil according to his ability. Other devices are used in the same manner as the question.

6. The use of the project[9] and problem helps meet the variation of pupils' interests and aims. The voluntary type selected by pupil himself but directed by the teacher is useful in this respect. The supervisor needs to act as a check on project-teaching in keeping the teacher's enthusiasm going at proper rate and in estimating the worth of the projects.

7. A plan that met with much favor a few years ago was promotion according to rate of progress. A bright pupil could finish high school in three years while the slower one carried only three subjects and remained five years. It is obvious that this is an administration problem. This plan was abused so much in the high schools of the Middle West that it had to be regulated by state supervisors.

8. The most elaborate system worked out in this field was based on the principle of individual instruction. In common parlance, it is called the Dalton Plan or the Winnetka Plan because of the early adoptions in those schools. There are hundreds of variations of the plan in use in schools today. Under this system, the classrooms were turned into laboratories for individual work and testing. Recitations in the old sense are not held. The Dalton Plan provides for monthly contracts which are given to the pupils. Each pupil works out his contract at his own rate of speed. The teacher's time is taken up with assisting pupils who have difficulties in learning and in testing pupils on completion of units in contract. Some schools which have adopted the individual instruction plan enrich the course for the brilliant student, others allow him to progress into the next class as quickly as he completes enough contracts. The chief advantage claimed for individual instruction is that it permits the child to progress at his own rate, thus permitting thoroughness and mastery of subject matter. The supervisor and teachers would be obliged to spend much time in serious study in order to launch any plan of individual instruction. The

[8] Morrison, H. C., *Practice of Teaching in the Secondary School.*
[9] Ferriss, E. N., *Secondary Education in Country and Village.*

schools which have tried such plans are almost unanimous in their assertions that they are very much worth while.

9–10. Two other plans sometimes used in trying to solve problems of individual differences are the graded plan, which has about gone out of fashion, and the after-school coaching of laggards done in many schools. In summing up the activities of the supervisor one finds many means both direct and indirect of assisting the teacher. A number of these means are listed in an effort to make them objective.

1. Procure and keep up-to-date a professional library (books and magazines) which will contain material and suggestions on individual differences.
2. Procure samples of diagnostic educational and ability tests for teacher to inspect. (The University of Illinois issues a bulletin on High School Tests.)
3. Keep some tests on hand, both group and individual, to use on special occasions and to solve case-study problems.
4. Keep filing case for case-study records of pupils. Add to material when possible.
5. Keep records of visitations and suggestions made to teachers on individual differences.
6. Study experiments made in other schools and occasionally have some teacher make an experiment, under direction, to try out the new methods.
7. Study ways of improving instruction for individual needs in regular faculty meetings. Have suggestive outline ready. Encourage teacher discussion and study for report in faculty meeting.
8. Study plans in departments for providing for variations in ability.
9. Frequent conferences with teachers over their own special problems.
10. Coöperation with administration in handling problem and remedial cases.
11. Adoption of policy or program accounting for differences.
12. Faculty meetings, group meetings, department meetings with the interpretation, use, and non-use of tests as a subject.
13. Case-study of problem children.
14. Training of at least a few teachers in giving tests and scoring them.
15. Visitations and follow-up conferences with teachers.
16. "Call" visitations.
17. A well-defined policy and program encouraging extra-curricular activities.
18. Coöperation on subject of vocational guidance and home-room work.
19. Inspiration backed by knowledge and enthusiasm in order to encourage teachers to persist in their efforts.

NUTRITION WORK IN CHATTANOOGA

W. T. ROBINSON
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More important than the impression upon stone, it has been said, is the impression upon the human mind. In the early days following the great World War, some one in Chattanooga was impressed with the importance of the relation of health to the well-being of Chattanooga's children. This impression made upon the mind of man resulted in action. As a result of this impression, the Chattanooga Chapter of the American Red Cross, through the vision and forethought of its chairman, planned with the Executive Committee to introduce nutrition work for the children of Chattanooga, through obtaining the services of a Red Cross nutritionist. They secured Mrs. John E. Gilbreath, a trained nutritionist, for this work and she is still directing it.

In those early days, the first step undertaken in this work was the planning of two nutrition classes for malnourished children. These classes were conducted during the period of school vacation. In addition to the nutritionist, a first-class pediatrician, a nurse, and a volunteer worker from the Chattanooga Junior League assisted with the work.

The material with which this group worked consisted of borrowed scales, a second-hand kodak, and a group of children who were eager to reach or claim what was then talked of as "normal weight." There were twenty children in each class. At the end of the vacation period early in September, the majority of those forty children had made gratifying advances in improved nutrition. This was accomplished through meeting the children regularly once a week for class instruction, when the nutritionist taught them how to choose and use their food. She not only did this, but inspired them to want food and to want to claim their optimal growth and health. When the class was held, the pediatrician assisted, making physical examinations of the children whose parents (mothers) were present. The nurse assisted him with the physical examinations. The parents not only listened while the class was being taught, but talked with the nutritionist about the food of the children. The nutritionist visited the home of each of these children, and she and the mothers worked together with the children to bring about improved nutrition.

This work gradually developed under the American Red Cross and grew into an educational nutrition program for *all* school children, as well as nutrition instruction for parents and teachers. In 1925, the nutrition work was entirely taken over by the public school system, and the work financed by the city Department of Education. Today, in Chattanooga, we have regular, graded, nutrition instruction for all school children in the grammar grades and the junior high schools. Some instruction is also going on in the senior as well as junior high schools through the home economics classes. Our nutritionist is responsible for the classes in nutrition instruction to all children in the elementary grades and in the junior high schools, excepting those in the home economics classes.

Our program is carried on through having our nutritionist offer the "Red Cross

Course in Nutrition for Teachers" to our regular classroom teachers. They have taken this course voluntarily. It is given at the University of Chattanooga. The teachers receive university credit and are also awarded Red Cross certificates for the course. At the present time, fully three-fourths of the teachers in the elementary grades have taken this course and received university credit and the Red Cross certificates for it. All teachers who have not had the "Red Cross Course in Nutrition for Teachers," as a course, have had, however, instruction in nutrition through our nutritionist at their weekly and monthly meetings.

Our nutritionist goes into the classroom to help the teachers work, just as any other supervisor does. She has a regular schedule, which is as carefully planned as the schedule of the classroom teacher. With the help of the classroom teachers who have been given this instruction in normal nutrition, and the help of the primary and intermediate supervisors, our nutritionist has planned a course of study in nutrition for our schools. We have been using this course of study for the past two years. Throughout the city, measurements and weights of the children and teachers are taken regularly. The underweight children are weighed monthly and given special help by the nutritionist through conferences with teachers, parents, and children, until they have attained their "normal weight."

Our medical department carries on the physical examinations for all our children, and our city nurses follow up through home visits for the physical defects. Our dental work has been done through the aid of a "church center," where a dental clinic is held, but now we have a city dental clinic, where our children are cared for.

The results of our nutrition work have been very gratifying. For example, in 1921, in one school, forty-seven per cent of the enrollment of the children was found to be ten per cent or more underweight. In 1928, in the same school, the percentage of underweight had decreased to ten per cent. In another school, in 1921, fifty-three per cent of the enrollment was ten per cent underweight. In 1928, in this school, the percentage of underweight had decreased to three per cent. And in still a third school, in 1921, sixty per cent of the enrollment was ten per cent underweight. In 1928, this was reduced to eight per cent. This gives some idea of the status of nutrition—according to weight and height—in 1921, when we began our educational nutrition program, for our records show that the figures quoted would have held good in practically all schools in our city. In 1928, the percentage of malnutrition—according to weight and height—was eight per cent. Our nutritionist states that this improvement has been largely due to the untiring efforts of our principals and our teachers, also to the ready response that the parents have given through the Parent-Teacher Association.

In addition to the instruction given to the child, the nutritionist has met groups of mothers and given them the "Red Cross Food and Nutrition Course." This course has been very popular, and all over the city mothers are practising in their homes the principles of nutrition which were secured through attending class instruction. Our nutritionist has also visited in the homes of the children who do not respond readily to the classroom instruction.

The Parent-Teacher Association has not only shown its interest through taking classroom instruction from the nutritionist, but it has also arranged group meetings through its various Parent-Teacher Associations throughout the city. At these meetings the nutritionist has talked to mothers—and fathers who happened to be

present—on the importance of nutrition, and appreciated with them the psychology needed in the home, as well as the nutrition knowledge needed in order to cope with the nutrition problems.

The Parent-Teacher Association has also done an excellent piece of work in the handling of the school cafeterias. In the early days, the cafeteria managers began to realize the importance of training in nutrition when coping with cafeteria problems. At their request, our nutritionist gave to each of them the "Red Cross Food and Nutrition Course" adapted to cafeteria managers' problems, for which they also received nutrition certificates. These cafeteria managers have steadily grown in their appreciation of the need of training. Today, every cafeteria manager in our schools either holds a "Red Cross Food and Nutrition" certificate or is working to earn one.

In addition to the work in nutrition which is being done by our nutritionist, we also have in our city high schools a supervisor of home economics and a corps of home economics teachers. They are emphasizing, as a part of their regular work, the relation of nutrition to health, with their home economic students. In this way, nutrition is also being taught to some of our senior high school students.

The following statements from our primary and our intermediate supervisors, also from the president of our Parent-Teacher Association, show, in part, the appreciation of our supervisors, teachers, and parents.

Since our primary children have been given definite and systematic nutrition instruction, they have developed a most favorable attitude toward this subject, accepting the recognized health standards, approving good health habits, and frowning upon unhealthful practices.

Skillful teaching by our Nutrition Supervisor and our classroom teachers has aroused a general desire to keep the health rules, and has shown our little folks exactly what to do; while varied and interesting devices have kept going the daily health chores, which gradually crystallize into desirable habits.

What delightful health stories we hear! What melodious jingles are recited and sung! What spirited dramatizations of health stories we behold! What interesting talks our little folks can make about leafy vegetables and juicy fruits! What marvellous posters celebrate the routing of the coffee pot by the milk bottle!

Surely our primary girls and boys are being led along delightful pathways into the Land of Health!

—Mary Mackinlay,
Primary Supervisor.

The Place of the Nutrition Work in Our School Program

As a teacher of children, rather than of subjects, I regard the nutrition and health work as important as any phase of school experience which the children are given, and as foundational to those phases of the school work for which I am more directly responsible. Not only is the child himself (the real center of all our work) made more capable by the health work of benefiting by the work in the regular school branches, but the work in those branches is so easily correlated with the health work. There is a benevolent circle from better physical to better mental, and from better mental back to better physical again; fortunately, we need not decide which is the cause and which is the effect, so long as the child is benefited.

When the National Education Association announced that we of the educational system must assume the health work load, shown so necessary by the physical unfitness of our soldier-citizenry, we bent our energies to the task. The work and its results have been their own reward.

So far from being a burden on the teachers of the so-called common school branches, this once uncommon school branch has made a place for itself in the school program which would cause it to be greatly missed. It has penetrated and vivified all the work, illuminating with the human side our arithmetic, reading,

geography, and kindred subjects. We should miss its motivation, were it removed from our curriculum. It has now, through the "Red Cross Nutrition Course for Teachers," filtrated from the expert down to the classroom teacher, who receives university credit for her studies, permeating all subjects in its passage. It has come to stay.

—Mrs. L. M. Russell,
Supervisor Intermediate Grades,
Chattanooga Schools.

In addition to the improved weight of the children in schools, some indices of the effectiveness of our work may be indicated by reports which we have from grocerymen. They state that their sales of whole-wheat bread, fruit, and vegetables have steadily increased during the last five years. One of the leading bakers of the city reports that, during the past two years, the sale of whole-wheat bread at his plant has increased fifty per cent. Our cafeteria managers in the schools show by their records that the sales in milk, vegetables, and fruits in the cafeterias have greatly increased during the past five years. They feel, as do the teachers, parents, grocers, and others, that this increase in the consumption of foods that are needed for health on the part of the children and their parents shows something of the results of the teaching of nutrition in our schools.

The nutrition work in our schools and in our city is having to do not only with food values—the choice and use of food that will help to produce optimal health and growth—but it is also giving considerable attention to better related health practices which, together with nutrition, are essential to the making of better citizens.

As the superintendent of schools, it has been my privilege to note that all the work in our schools is conducted in such a way that the children delight in it. They are learning to build better bodies as a dwelling place for their minds, through choosing food of the right kind—building material with which our bodies must be built.

In Chattanooga, we believe that the following statement made by Dr. E. V. McCollum is true: "The correct diet of the individual is the most important single factor in public health; it is the material with which to build the foundations of success."

Through the help and coöperation of our Red Cross, our parents, principals, teachers, Health Department, grocers, bakers, dairies, farmers throughout the land, and others, we in Chattanooga have built and are building, through our nutrition work, boys and girls with strong bodies—parents for tomorrow.

THE PRESENT STATUS AND FUTURE POSSIBILITIES OF THE PROJECT METHOD IN PUBLIC SCHOOL TEACHING—I[1]

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The aim of this study was to determine: (1) to what extent the project method is being used by public school teachers; (2) the attitude of teachers and supervisors who are using the method toward continuing and extending its use; (3) the subjects of the elementary school most often taught by this method; (4) the difficulties and advantages most often encountered in its use; and (5) the interpretation of the project and project method by those teachers and supervisors actually using it. The ultimate objective of the study was to determine, through an analysis of the above: (1) the future possibilities of the project method in public school teaching and (2) what recommendations should be made for its wider and wiser use.

FACTORS WHICH PROMPTED THIS STUDY AND INVESTIGATION OF THE PROJECT METHOD IN TEACHING

Since the formal launching of the project method by Doctor William H. Kilpatrick of Columbia University, in 1918, there has been a vast amount of writing, much of it of a controversial nature, on the project method. To substantiate this, one has but to refer to the bibliographies on project method and to the last ten years of the *Reader's Guide to Periodical Literature*. Probably no method has provoked more thought among leading educators than the project method.

Many thinking investigators have come to realize that there is not much that is new in the method except the name and the variety of definitions which attended its introduction into educational circles. Many teachers have created situations which enlisted the active participation of nearly every member of a large group, because there was a dominating purpose which utilized the activity of the pupils in the completion of a project of life value. Any keenly observant principal or superintendent can attest the almost transforming power that certain teachers have wielded in changing purposeless boys and girls to energetic, achieving, and purposeful workers. These teachers sensed the eternal verity that knowing, desiring, and doing must go hand in hand if the children are to learn or have educative experience. This they knew, though they might not have heard of nor ever used the term "project method." The method of many teachers conforms to the laws of learning, though they are unable to analyze those laws. This is not a pleading for the ignorance of the teacher, but merely calling attention to the fact that the project method is not new; it is as old as civilization itself. The Indian youth who made his first bow attacked the new problem with the same interest and fixed aim that the modern boy searches through volumes for arguments which will win his debate. If we could believe this truth—that all successful life is made up of worthy purposes or projects at which we are all engaged during the greater part of our waking hours; if we could honestly analyze

[1] From a study submitted in partial fulfillment for the Master of Arts degree in Education at Colorado State Teachers College. The second part of the article will appear in the December issue.

the factors which played the important rôle in our own growth, there is little doubt as to what our attitude toward the project method would be. An honest survey of our own lives to determine where most learning occurred cannot but lead to the conclusion that the greater part of learning took place in the conscious pursuit of whole-hearted purposes. This is project method.

If we turn from our observation of the project method to a consideration of the educational psychology and philosophy which dominate American thinking today, we find a significant agreement. Both emphasize the needs of life situations, problem attitudes, interests, purposes, and definite objectives. Thorndike,[2] in evaluating the important factors involved in any learning process, discusses (1) interest in the work; (2) interest in improvement; (3) significance of the work to the worker; (4) problem-attitude; (5) attentiveness; and (6) absence of irrelevant emotional excitement and worry. These are identical with the factors which are involved in carrying a purposeful act to successful completion.

Dewey[3] in analyzing the relation of method to thinking states:

> Processes of instruction are unified in the degree in which they center in the production of good habits of thinking. While we may speak, without error, of the method of thought, the important thing is that thinking is the method of an educative experience. The essentials of method are therefore identical with the essentials of reflection. They are, first, that the pupil have a genuine situation of experience—that there be a conscious activity in which he is interested for its own sake; secondly, that a genuine problem develop within this situation as a stimulus to thought; third, that he possess the information and make the observations needed to deal with it; fourth, that the suggested solutions occur to him which shall be responsible for developing in an orderly way; fifth, that he have opportunity and occasion to test his ideals by application to make their meaning clear and to discover for himself their validity.

We therefore contend that from the standpoint of utilizing the laws of learning the project method coincides with these requirements. It seems that we might justly say that the project method is a method of methods, a dominating principle, a philosophy of education embodying the same situations and driving force encountered in all life projects. This is in accord with Dewey's philosophy that "education is life." Thus it seems that both the observation of the project method and our educational philosophy and psychology which dominate our American schools contribute worth-while evidence to the soundness of this method.

There is, however, another important factor which is all-important if the project method is to survive as a method of school instruction. That is the factor of *application*. The importance of the successful use of the project method can hardly be overestimated. Hosic and Chase[4] put it thus:

> "We believe that project method is a fruitful concept of living, learning, and teaching, destined to influence profoundly the educational practice of the future and that for good. Whether it does or not will be determined by the meaning which is attached to it and the good sense and skill with which the idea is put into practice."

In other words, the theory of the project method may be inherently valid, but if it cannot be so applied that its virtues stand out clearly, its cause is lost as a method of teaching.

The first ready acceptance of the project

[2] Thorndike, E. L., *Educational Psychology, Briefer Course.*
[3] Dewey, John, *Democracy and Education.*
[4] Hosic, James F., and Chase, Sara E., *Brief Guide to the Project Method.*

method enlisted many teachers who saw but the superficial side. In many instances this is the very thing which brought discredit upon the method. Through study and professional training in project method, teachers can be brought to the realization that project method is not a device, or a "trick of the trade" which may be learned in a few weeks; but rather, that it is a fundamental principle to be seriously considered in all teaching. It should be thought of as a method of methods, a fruitful concept of living. As Doctor Bagley puts it: "Certainly there is no problem more fundamental or perplexing than that which is involved in the effort to link what we call knowledge with the larger complex that we call life."[5] Doctor Stevenson also senses the difficulties and limitations of the project method: "The author realizes the difficulty of organizing a course completely on the project basis. But wherever it is possible to substitute units of work on the project basis, the results will show the effectiveness of the project method."[6]

The teacher using this method is confronted with problems intensely perplexing. A sense of insecurity and doubt often prove a check to the use of this method. We know very little of the results obtained by regular teachers, and critic teachers, in the use of this method in their teaching. It is evident that an impartial investigation of the difficulties and advantages, trends in use, and interpretation of the project method as viewed by competent teachers and supervisors should be most helpful in determining its present status and future possibilities. Such an investigation may be suggestive of helpful coöperation between the educational theorist and the teacher, to the end that the virtues of the method may be saved for a wider use, that the remediable difficulties may be overcome, and that a better point of view of the project and project method may be established. If the project method is fundamentally right and the technic in applying it is wrong, it is essential that educators know where the difficulty lies. Investigations of the "how" in public school teaching should prove even more valuable than investigations of the "what."

Briefly, it may be said that observation justifies confidence in the efficacy of the project method, a method which harmonizes with the laws of learning and the philosophy, "education is life." There are difficulties and problems in the field of application of this method which should be investigated, if the possibilities of the project method are to be realized.

TECHNIC USED IN DETERMINING THE CONTENT OF THE QUESTIONNAIRE AND FIELD OF INVESTIGATION

The problem of determining the details of the questionnaire in a fair, unbiased, and somewhat scientific way required a thorough investigation of the literature on the subject, and also many personal interviews with teachers.

A quite exhaustive examination of reports on project teaching which have been published during the past ten years was made to determine the difficulties and advantages of the project method as reported by teachers. In addition to this, a survey was made of books and articles written by frontier thinkers in this field, such as: Kilpatrick, Bagley, Hosic, Chase, Meriam, Collings, and others, to determine what they would include in the difficulties and advantages of the method. From these two sources, a list of fourteen difficulties and fourteen advantages were decided upon as sufficiently inclusive for the report.

[5] Stevenson, John F., *The Project Method of Teaching.*
[6] *Ibid.*

Blank spaces, however, were left for listing others. This list was afterwards passed to twenty teachers for suggestions as to changes and additions.

By direct questioning of a number of teachers it was found that the true index of the success or failure of any method of procedure in teaching (as viewed by the teachers themselves) was their determination to continue or discontinue its use. It seems that this is axiomatic; however, one teacher mentioned "Too much work" as the primary cause for discontinuing a method of teaching that was getting unusual results. In all other cases the answers to the question, "Why did you discontinue some method formerly used?" were, in substance, "I did not get satisfactory results"; "It did not work well"; or "I found a better way." It was therefore decided to submit the questions [7] on intent of continuing and extending the use of the project method as a determinant of the success found in the use of the method. It was suggested, however, that there is another factor which might influence greatly the continuation of a method, and that is: the attitude of supervisors and coworkers. Question seven was therefore included to determine this.[7] It was also desirous to know the frequency of the use of project method in the various school subjects. Under 2 of the questionnaire are found 17 common school subjects listed for ranking.

Questions nine and ten were incorporated to determine the qualifications and training of those answering the questionnaire. Returns of any without a background of reading and training in project method were discarded.

There has been and still is much controversy as to what constitutes a project. By Kilpatrick's definition any activity which is whole-heartedly purposeful becomes a project. Others believe that rather complex problems of the constructive type are required to satisfy the requirements of a project. It is evident that the interpretation of the project by the teacher will determine to a large degree the difficulties and advantages attributed to it. An effort was therefore made to get the reaction of teachers upon a list of 32 activities [7] of four types, namely: constructive, problem, drill, and appreciation types. These were to be checked as satisfactory or unsatisfactory in filling the requirements of the project if purposefully carried out.

At the close of the questionnaire two questions were asked for the purpose of determining further the teacher's interpretation of project and whether there was consistency here with the checking of the 32 activities of the four project types.

FIELD OF INQUIRY

A sampling of 150 questionnaires were sent out to professionally trained teachers and superintendents of Colorado. From this sampling but 44 returns were received. The fact that many questionnaires were returned unmarked led to the opinion that the field of inquiry should be enlarged and changed to critic or training teachers of teachers' colleges. Questionnaires were sent to training school teachers of grades two to eight in 41 teachers' colleges in 26 states. A total of 190 questionnaires were sent out, four to small schools and six to large schools. A total of 77 returns were received from this source, making a total of 121 satisfactory questionnaires on which to base conclusions. These, however, represented a return from those actually engaged in teaching or supervising teaching by project method.

[7] See questionnaire.

PROPERTY OF
GRAND HAVEN PUBLIC SCHOOLS

QUESTIONNAIRE

Will you kindly assist in this study of the "Project Method" by filling in your name, address, and position? Check questionnaire as indicated and mail in enclosed envelope.

Name .....Position .....
City .....State .....Date .....

1. To what extent do you use project method? (Check x) Amount of school work based on project method.

Used often.....	Used occasionally.....
Rarely used.....	Never used.....

2. Rank the following subjects 1, 2, 3, 4, etc. as to the frequency you have used the project method in teaching them. The subject where most used rank 1, next in order rank 2, and so on. Cross out subjects not taught.

1. Reading	6. English .....11. Industrial Arts ...16. Physiology	
2. Writing	7. Civics .....12. Nature Study.....17. Physical Tr.....	
3. Spelling	8. Geography .....13. Elem. Science ....18.	
4. Arithmetic	9. Hygiene .....14. Citizenship .....19.	
5. History .....10. Drawing .....15. Music .....20.		

3. To which of the following do you attribute most of your difficulty in the application of the project method? Check by rank 1, 2, 3, 4, etc. Two of equal rank list or check with same number. List other difficulties you have in blank spaces.

1. Inadequate time	9. Interferes with school routine.....
2. Too much freedom for children .....10.	Overworks the teacher.....
3. Too much confusion .....11.	Lack of coöperation.....
4. A few do most of the work.....12.	Wastes too much time.....
5. Inadequate preparation of the teacher....13.	Lack of mental work.....
6. Difficulty in completing project.....14.	Indefiniteness of assignment.....
7. Could not enlist all in project.....15.	.....
8. Projects lacked clear objectives.....16.	.....

4. To which of the following do you attribute the greatest advantage of the project method? Check by rank 1, 2, 3, 4, etc. Two of equal rank check with same number. List other advantages in blank spaces.

1. Enthusiasm in work.....	9. Better learning takes place.....
2. Teaches lesson of self-control.....10.	Children learn to do things.....
3. Teaches lesson of self-reliance.....11.	Learning is retained better.....
4. Develops leadership .....12.	Teaches art of coöperation.....
5. Pupils are more interested.....13.	Cultivates scientific attitude .....
6. Discipline is shifted to group.....14.	Encourages expression of opinion.....
7. Deals with life situations.....15.	.....
8. More learning takes place.....16.	.....

5. Do you intend to use the project method in your teaching this year? Yes....No....
6. Do you intend to make a wider use of it? Yes....No....
7. Is there a sympathetic attitude toward project work on the part of supervisors and co-workers? Yes....No....
8. Have you had any professional training in project work? Yes....No....
9. Have you read any books on project work? Yes....No....

QUESTIONNAIRE

Will you kindly indicate by checking (x) after the words *Yes* and *No* which of the following examples you consider projects and, if rightly carried out, would come under the term "Project Method" in teaching?

1. Building a school coal shed, which leads to interest in a study of forests, woods, lumber, nails, tools, transportation, etc. Yes....No....
2. Making a product map of South America to assist in geography work. Yes....No....
3. Telling the story of a circus parade by cutting and arranging models. Yes....No....
4. Making a sled that it may be enjoyed during the coasting season. Yes....No....
5. Constructing an Indian tepee for dramatization. Yes....No....
6. Making drawings to tell the story of the Pilgrims. Yes....No....
7. Making a dress for a new doll. Yes....No....
8. Stenciling curtains which are to be a Christmas present for Mother. Yes....No....
9. Finding out why smelteries and steel mills are located at Pueblo, Colorado. Yes....No....
10. Determining why Colorado grows so many sugar beets. Yes....No....
11. Gathering information to prove that the cost of living is decreasing. Yes....No....
12. Finding out how the observance of Thanksgiving day came about. Yes....No....
13. Determining why more rainstorms occur during summer afternoons than mornings. Yes....No....
14. Finding out why Andrew Jackson was called "Old Hickory." Yes....No....
15. Examining maps to determine the greatest railroad centers. Yes....No....
16. Investigating the cause for the formation of dew and hoar frost. Yes....No....
17. Pronouncing spelling words that practice may be had before the lesson. Yes....No....
18. Mastering the forty-five addition facts for a special recognition. Yes....No....
19. Fixing in mind the names of the countries of Europe. Yes....No....
20. Using the dictionary to become proficient in looking up words. Yes....No....
21. Practicing writing so that the letter in answer may be better than the one which was received. Yes....No....
22. Repeating a poem to fix it in one's mind. Yes....No....
23. Practicing a difficult passage of music so that it may be played well. Yes....No....
24. Writing a name several times in order that it may be recalled. Yes....No....
25. Reading stories of pioneers of your own country. Yes....No....
26. Listening to phonograph records preparatory to a music recognition contest. Yes....No....
27. Watching a squirrel crack nuts because of interest in the animal's ways. Yes....No....
28. Studying the beauty of a picture because you enjoy it. Yes....No....
29. Listening to the reading of lyric poems because you appreciate beauty of rhythm. Yes....No....
30. Feeding the birds so that they may become tame. Yes....No....
31. Listening to a humorous story to get the point. Yes....No....
32. Enjoying the stereoscopic views of the country you have been studying. Yes....No....

There is much discussion and diversity of opinion as to what constitutes a project.

1. Are you one of those who believes that a project is a relatively complex problem which is worked out through objective activity? Yes....No....
2. Do you consider any whole-hearted, purposeful act carried to completion a project? Yes....No....

FINDINGS OF THE INVESTIGATION

Extent of the Use of Project Method

Table I indicates the amount of use reported by the 121 returns from teachers and supervisors.

TABLE I
EXTENT OF USE OF PROJECT METHOD

Amount of Use	Frequency
1	*2*
1. Often	56
2. Occasionally	47
3. Rarely	6
4. Never	0
Total reporting	109
Not reporting	12
Total	121

THE AMOUNT OF USE OF PROJECT METHOD BY SUBJECT

In the survey of reports of teaching by the project method, it was found that almost all of them came under types of constructive project or problem project. Projects in manual arts, domestic science, geography, civics, history, and elementary science have been reported much oftener and at greater length than arithmetic, spelling, music, and art. This investigation gives evidence that the first named group receives far more teaching by project method than the latter group. Table II shows the frequency of use of the project method in seventeen subjects. It will be noted that 46 of the 65 who rank geography gave geography first place; 28 out of 43 ranking industrial arts gave first place to that subject; 36 out of 75 gave first place to project work in English; and 13 out of 32 gave first place to civics. These are the four subjects having the highest per cent of first rank: geography, 70.8 per cent; manual training, 65.1 per cent; English, 49.3 per cent; and civics 40.3 per cent. In contrast to this, physiology has 0 first rankings out of 42; music, 2 out of 16; writing, 5 out of 34; and reading, 12 out of 64. Expressed by per cent, physiology has 0 per cent in first rank; music, 12.5 per cent; writing, 14.7 per cent; and reading, 18.7 per cent. While the per cent of first rank in importance must not be taken as the total value of the ranking, it is interesting to note that geography, industrial arts, English, and civics receive far more instruction by project method than such drill and appreciation types of subjects as writing, spelling and music. It should be observed that physiology should have no place at all as a subject to be taught in the grades. It is evident that it should be taught with hygiene, which has a ranking of first place by 12 of the 42 reporting on that subject. Music, as a study enlisting the interests of children, ranks low. If more music were used in extra-curricular activities, special programs and life situations, there is no reason why music should not have as high first ranking as any subject. Likewise, there is no reason why drill subjects cannot be more effectively taught by the project method. Dr. Courtis[8] says: "It cannot be too much emphasized that drill may be as much a self-directed activity with purpose as any other occupation. It is for this reason, I take it, that drill finds a place among Kilpatrick's four types of projects."

Table III extends Table II by weighting. The weighting is found by multiplying the frequency in each rank by the weight

[8] Courtis, S. A., "Teaching Through the Use of Project and Purposeful Acts." *Teachers College Record*, 1920.

TABLE II

FREQUENCY OF USE OF THE PROJECT METHOD BY SUBJECTS

Subjects	Frequency of Rank					Total Frequency
	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	
1. Reading	12	20	18	11	3	64
2. Writing	5	12	7	6	4	34
3. Spelling	7	8	8	5	5	33
4. Arithmetic	19	19	10	13	4	65
5. History	21	22	9	7	6	65
6. English	36	17	7	9	4	73
7. Civics	13	10	5	3	1	32
8. Geography	46	11	5	3	0	65
9. Hygiene	12	14	5	5	6	42
10. Drawing	8	14	6	6	6	40
11. Industrial Arts	28	7	6	0	2	43
12. Nature Study	14	15	4	11	6	50
13. Elementary Science	10	4	3	4	4	25
14. Citizenship	18	11	4	5	4	42
15. Music	2	3	7	4	0	16
16. Physiology	0	3	1	3	0	7
17. Physical Training	4	6	4	3	0	17
Totals	255	196	109	98	55	713

assigned. For example, in reading there is a frequency in the first rank of twelve; this multiplied by the assigned weight of the first rank, which is five, gives a weight of 60 in Rank 1 of Table III. This table takes into account the number of teachers reporting in determining the average weight. This average weight will be found by dividing the total weight by the total frequency of each subject. It is significant to note that geography is given an average weight of 4.5; industrial arts, 4.1; English, 4.0; and civics, 4.0. These subjects have the highest average weight as well as the highest first ranking, while physiology, with a weight of 3.0; music, 3.0; writing, 3.2; and spelling, 3.2, are the four subjects of lowest average weight. Likewise the lowest per cent of first ranking with one exception, which is reading, falls to the four of lowest weight.

DIFFICULTIES IN THE APPLICATION OF THE PROJECT METHOD

What are the difficulties encountered by teachers in the use of the project method in teaching? The answer to this question was attempted by submitting fourteen difficulties which have been reported by investigators of the method, or by frontier thinkers in educational literature. It will be noted that blank spaces were left for reporting difficulties not listed. These difficulties were ranked by number to indicate

TABLE III

WEIGHTING BY RANK FREQUENCY OF USE OF PROJECT METHOD BY SUBJECTS AS SHOWN BY TABLE I

Subjects	Weight by Rank					Total Weighting	Average Weight
	Rank 1 Weight (5)	2 (4)	3 (3)	4 (2)	5 (1)		
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1. Reading	60	80	54	22	3	219	3.3
2. Writing	25	48	21	12	4	110	3.2
3. Spelling	35	32	24	10	5	106	3.2
4. Arithmetic	95	76	30	26	4	231	3.6
5. History	105	88	27	14	6	240	3.7
6. English	180	68	21	18	4	291	4.0
7. Civics	65	40	15	6	1	127	4.0
8. Geography	230	44	15	6	0	295	4.5
9. Hygiene	60	56	15	10	6	147	3.5
10. Drawing	40	56	18	12	6	132	3.3
11. Industrial Arts	140	28	18	0	2	188	4.1
12. Nature Study	70	60	12	22	6	170	3.4
13. Elementary Science	50	16	9	8	4	87	3.5
14. Citizenship	90	44	12	10	4	160	3.8
15. Music	10	12	14	8	0	51	3.0
16. Physiology	0	12	3	6	0	21	3.0
17. Physical Training	20	24	12	6	0	62	3.6

their importance, the most important being ranked 1, second in importance, 2, and so forth.

Table IV assists in the diagnosis of handicaps to its use. It is significant that the difficulties which have the highest frequencies of mention are found to be difficulties which should be to a very large degree remediable. In the first rank of Table IV we find by far the highest frequency of mention in (1) *inadequate time,* and (5) *inadequate preparation of the teacher.* In these two difficulties we find 91 of the 173 frequencies of first rank. In other works, 53.1 per cent of all the first rank difficulties fall in these two places. In contrast to this (1) *lack of coöperation* has but one frequency of first rank; (13) *lack of mental work,* 1; (2) *too much freedom,* 3; (3) *too much confusion,* 5; (12) *wastes too much time,* 5; and (10) *overworks the teacher,* 5. It will be seen that these six difficulties have a total frequency in the first column of but twenty, and represent but 11.5 per cent of the total difficulties of first rank. This is quite sufficient evidence that teachers and supervisors do not consider these six difficulties of great importance. There are four difficulties: (7) *could not enlist all in project;* (9) *interferes with school routine;* (8) *projects lack clear objectives;* and (14) *indefinite-*

TABLE IV

RANKING BY DIFFICULTIES IN APPLICATION OF PROJECT METHOD

Difficulties	Frequency by Rank					Total
	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	
1	*2*	*3*	*4*	*5*	*6*	*7*
1. Inadequate time	54	20	6	4	4	88
2. Too much freedom for children	3	8	7	12	1	31
3. Too much confusion	5	5	12	12	2	36
4. A few do most of the work	16	25	7	5	2	55
5. Inadequate preparation of the teacher	37	16	8	5	4	70
6. Difficulty in completing project	9	19	21	7	5	61
7. Could not enlist all in project	9	19	13	10	4	55
8. Projects lacked clear objectives	8	6	9	7	4	34
9. Interferes with school routine	9	8	10	8	5	40
10. Overworks the teacher	5	8	7	9	6	35
11. Lack of coöperation	1	8	6	8	2	25
12. Wastes too much time	5	5	8	7	6	31
13. Lack of mental work	1	5	6	3	1	16
14. Indefiniteness of assignment	7	11	4	7	3	32
15. Lack of room	..	1	..	..	..	1
16. Lack of material	2	..	..	..	..	2
17. Too large groups	2	..	..	..	..	2
Totals	173	164	124	104	49	614

ness of assignment, which have a total of 33 first rank difficulties. It will be noted, however, that number eight and number fourteen are probably the result of *inadequate preparation of teacher.* Number nine is not serious as a difficulty for there is nothing more stultifying than inflexible routine. Number seven will always be a marked difficulty as individuals differ greatly; hence, the impossibility of group activities enlisting the interest of all.

This consideration of first ranking of difficulties, however, gives no consideration to other rankings, which must be considered to get a more accurate basis in determining importance of difficulties.

Table V gives a more accurate basis for this comparison of the importance of difficulties than Table IV of frequency, or a consideration of first rank as shown by that table. The total weight of each difficulty will be found in the same manner as explained in the discussion of Table III. The total weight of each subject is a good index to the importance of the difficulty. This table shows that nearly 75 per cent

TABLE V

WEIGHTING BY RANK DIFFICULTIES IN APPLICATION OF THE PROJECT METHOD

Difficulties	Weight by Rank					Total Weighting
	Rank 1 Weight (5)	2 (4)	3 (3)	4 (2)	5 (1)	
1	*2*	*3*	*4*	*5*	*6*	*7*
1. Inadequate time	270	80	18	8	4	380
2. Too much freedom for children	15	32	21	24	1	93
3. Too much confusion	25	20	36	24	2	107
4. A few do most of the work	80	100	21	10	2	213
5. Inadequate preparation of the teacher	185	64	24	10	4	287
6. Difficulty in completing project	45	76	63	14	5	203
7. Could not enlist all in project	45	76	39	20	4	184
8. Projects lacked clear objectives	40	24	27	14	4	109
9. Interferes with school routine	45	32	30	16	5	128
10. Overworks the teacher	25	32	21	18	6	102
11. Lack of coöperation	5	32	28	16	2	73
12. Wastes too much time	25	20	24	14	6	89
13. Lack of mental work	5	20	18	6	1	50
14. Indefiniteness of assignment	35	44	12	14	3	108
15. Lack of room	..	4	..	..	..	4
16. Lack of material	10	..	..	..	..	10
17. Too large groups	10	..	..	..	..	10
Totals	865	656	372	208	49	2150

of the weight value is found in the first two ranks. The total mention of difficulties shown by Table IV is 614, and the total weight of difficulties shown by Table V is 2,150. These totals will be used later in comparing difficulties and advantages.

(To be concluded)

TWO SUPERVISORS

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The first of two supervisors, whom we shall call supervisor "A," was very systematic. At the beginning of the school year she called a teachers' meeting to present her supervisory program for the year. This program was to be a "drive" for the improvement of instruction in arithmetic. She announced to the teachers that her first step would be to find out what kind of work *they* (the teachers) were doing in arithmetic. To this end she proposed during the next two weeks to visit every teacher to observe arithmetic work. During this two weeks' period every teacher was on the alert to see that she was doing her very best in teaching arithmetic. Every teacher was concerned lest during the visits the supervisor might secure the impression that the teacher was inefficient. The teachers did all they could to be prepared for the supervisor's visits. According to one of the teachers, the teaching group was more concerned during this two weeks' period about what would happen to them as teachers than about the way the children might be succeeding in arithmetic.

After visiting each teacher during an arithmetic lesson, the supervisor again called a faculty meeting. She announced the results of her investigation and presented definite teaching procedures for the teachers to use. She informed the teachers that during the coming month she would visit them again to see how they were getting along with these methods and to help them wherever possible. The teachers did everything they could to make sure that they were using the methods presented by the supervisor. They were especially anxious that during the supervisor's visits they were doing exactly what they had been told to do. Since they were concerned about meeting the demands of the supervisor they had as yet given little thought to the progress of the children under the procedures followed. The teachers did, however, in most cases, succeed in teaching according to the supervisor's method. In the use of this method they secured effective assistance from the supervisor.

The second supervisor, whom we shall call supervisor "B," was somewhat uncertain as to what the supervisory program for the year should be. At the first teachers' meeting she discussed the problem with the teachers. There was difference of opinion among the teachers as to what subject was in greatest need of attention. Some thought all subjects should be attacked simultaneously. One teacher remarked that further discussion was futile since no one knew what was most needed. She suggested further that tests be given in the principal subjects to determine what subject was in greatest need of improvement. The suggestion met with general approval and a committee of teachers was selected to coöperate with the supervisor in planning a series of tests to be given as soon after the opening of the school year as possible.

The tests were given, scored, and interpreted by the teachers working in groups. The results were graphed and presented to the staff as a whole in a meeting. It appeared that the schools were doing their poorest work in arithmetic. Accordingly, the improvement of teaching in this sub-

ject was selected as the special supervisory problem for the year.

The supervisor now raised the question as to the nature of the program to be carried out. After some discussion it was decided to give diagnostic tests in as many phases of arithmetic as possible, selecting one problem at a time and providing definite remedial work before undertaking another. Note that this was an effort to find out, not what kind of work *teachers* were doing but rather what kind of work *children* were doing in arithmetic. From now on the supervisor assumed leadership in a variety of activities designed to help teachers to find out all they could about the work of children and to improve the opportunities for learning. The supervisor was called to various rooms to help construct tests, to advise on remedial treatment in special cases, to make a study of children's difficulties in fractions, or to assist in introducing a new kind of drill card.

In the case of supervisor "B," the teachers were not worried about what was to happen to them as teachers but they were bending their efforts to the problem of studying the children and to the improvement of the learning situation. The supervisor visited classrooms occasionally. During such visits the teacher would not try to show off for the supervisor. On the contrary, she would make a special effort to bring problems and problem cases to the attention of the supervisor. She would ask the supervisor to work with individual children. She would keep a list of her problems. Occasionally the teacher might teach a particular lesson or unit, asking the supervisor to observe in order to determine if possible the reason why results did not seem to be forthcoming.

THE TWO SUPERVISORS COMPARED

Supervisor "A" was systematically and critically evaluating the efforts of teachers, telling them what to do and how to do it. She was orienting her work toward the teacher, making the teacher the center of the activity, rating, measuring, and judging the teacher's work. "B" was a leader coöperatively engaged with teachers in the study of and teaching of pupils. Her supervisory procedure was *child centered.* The teacher was not under fire. She was not primarily being measured or judged. The attention of the teacher was taken away from herself and directed toward the child.

Perhaps supervisory work has too often been teacher-centered, distracting the attention and energy of the teacher from the child and the learning situation to herself and her own welfare. May it be that if supervisory work were directed toward the coöperative study of the child and the solution of his learning problems, greater progress might be made?

In connection with the plan followed by supervisor "B," one could ask what should be done about other school subjects or about other supervisory problems, such as the curriculum and the materials of teaching? One illustration from the experience of Supervisor "B" will be suggestive. After a great deal of effort spent on problem-solving in arithmetic, the teachers found very little improvement. When the problem was discussed, one teacher suggested that perhaps the difficulty was not a matter of method but of content. "Are we now teaching the problems best adapted to the needs, abilities, and interests of the children?" Accordingly, the selection of problems was undertaken, again on a cooperative basis. This time a definite curriculum problem was under investigation.

Some pupils had little need of special attention in arithmetic. What should be done with them? It was decided to let such children give special attention to the sub-

ject in which the tests had shown them to be weakest. For some this was reading. Before long the teacher was faced with the problem of working out remedial procedures in reading, spelling, and other subjects. In this way a program which began as a study of arithmetic extended to almost all subjects. Obviously, it could not be completed in a year. It raised problems, the solution of some of which will not be attempted for some time. These problems will likely carry over from year to year. They will be a stimulus for activity in supervision and for study and self-improvement on the part of teachers.

Of course, no one has data to prove the superiority of either of the procedures followed by the above supervisors. One answer to the question would be to ask teachers which supervisor they would prefer.

MORAL SIGNIFICANCE OF THE SOCIAL ORGANIZATION OF SCHOOLS

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In a certain most important respect the typical American school follows the "educational" practice of the muddauber. The muddaubers build their little schoolhouses, room at a time, and, packing each room when finished with spiders and insects, they place in it one or more embryonic muddaubers, still in the egg state of existence. *Then the room with its store of food for mind and body and its portion of the rising generation is sealed up without door or window—lest there be social contact between rooms or contamination from the world. Here the parents' responsibility ends and the young generation does not break from its narrow cell until adulthood, when behold—the young adult, stepping out into the world for the first time,* is perfectly fitted to carry on in the most up-to-the-minute muddauber affairs!

Human character develops through the social contacts of work and play, in moments of unguarded understanding and sympathy, through feeling rather than intellect, and *socially our schools shut up each generation in a cell to itself.* Upon entering school a child is placed in a room with others of his own age and ability, even to the nth degree. Older brothers and sisters are in different rooms, if not in different schools, and recesses come at different hours or play space is different.

And the segregation in school is only an extreme of the tendency outside of school. At home the father has to go to work before the child is up; in the evening he is weary, and there are the paper, the lodge, and other adult interests. The mother may also work away from home, have her clubs and other "social" obligations. Some ignorant girl, black or white, may have the care of the child at home—the point is that the drift is away from the intimate society of the time of home industries or pioneer days. Brothers and sisters run in and out with their own companions, the family is held together very loosely. At supper father thinks "shop," mother thinks bridge, boy thinks marbles—conversation languishes and understanding departs.

Back at school—as the years pass the child learns to look at things more and more from the point of view of his class.

He and the other members of the class meet the changes and stages of development together and are swayed at the same moment by the same impulses. "Everybody else (meaning others in the class) is doing it" becomes the ultimate in standards. Their influence on one another is profound—but *unpredictable;* they have no patterns from the past to follow, no traditions, nor are they directed surely by wise instinct.

As the growing child finds less understanding at home, class ties become stronger. Parents are prone to be old-fashioned, some are foreign or have an accent, some are poor, many ignorant—children feel ashamed, superior. Conflicting old world cultures lose out—nothing takes their place but the fads and fetishes of the class. It takes a strong teacher indeed to give any direction. Finally from some unpredictable zenith of "originality" in standards and outlook, at the end of high school days the class steps out into the world, "prepared for life's work!"

"Prepared!"—by social segregation with a narrow, like-minded clique to live far-scattered in an exceeding wide world!

Prepared to see the older fellow's point of view? or the younger fellow's?

Prepared by no responsibility for responsibility?

Prepared, by what tests, to estimate himself?

Prepared?—this class, this cross-section of discontinuity—to carry on noble traditions poured into the minds, perhaps, but not the hearts!

"Prepared"—but not to lift up the torch of civilization and carry it on, for that requires the "over-lap of the generations"; prepared in intellect but not in the weightier matters of right sympathies, large loyalties, safe ideals and standards!

Like the old-time family, the old country school was strong where the present system is weak. All in one room and on one playground, children looked at things daily with older children and younger. Brothers and sisters were responsible for one another, the older saw the younger following in their steps. Leadership and fellowship developed more sanely. The individual measuring himself against the extremes in the group could estimate his abilities more accurately. He learned by "catching it" the sentiment attached to sacred things, loyalties, ideals, standards. Progress in civilization under such a system may have been slow—but it was predictable.

The Boy Scout organization uses the patrol as the unit. Each troop is divided into two or more patrols. Instead of having all the scouts of one age in one patrol as would be done at school, each patrol is made up of boys of all scout ages and ratings. A great schoolmaster once said that youth is eager for patterns in behavior and is in truth very conservative if the standards and traditions are provided. So the scout patrol, knit into a close social unit by competition with other patrols, in its work and play learns naturally from its older members the standards and sentiments that belong to a sane, civilized character.

It is said that an English mother insists on sending her boy away from home to a "public school," a boarding school, at the age of twelve or thirteen—for the good of his manners and morals! It is significant that the social unit in these schools corresponds to the patrol. The social unit is not the class but the "House," being all the students residing in one of the campus homes—so that members associate not only in school work and play, but actually live together, "somewhat like a family." Competition between houses is keen, "house spirit" taking the place of our "class spirit."

A century ago moral conditions in these famous "public schools" of England had become scandalous, as one might expect of the "house" organization in a slack age and under gross neglect. Then Dr. Thomas Arnold was made headmaster of Rugby, one of these old schools. He set about the task of reform. He used the machinery he found, and "made it click." He undertook to make the older boys feel responsible for the conduct and honor of their houses. After a very few years his success was so apparent as to be undisputed. But that there was great inherent strength in the House System itself is apparent from the fact that, inspired by the success of Dr. Arnold, reform quickly spread to them all, and continuously since, these schools have retained the high regard of the English people.

Compared to ours, the English high school, "public" in the sense in which we use the term, is of recent origin and sudden development. About 1890 a few masters of these new schools detected a lack of social cohesion in the student body. Turning naturally to the old "public schools" for a suggestion, they adapted the House System to the new day school. To build up the unity of the house and exploit its advantages under the restrictions of a day school, competition between houses is encouraged in academic as well as in athletic and other extra-curricular activities. Thus at every recitation there is more or less competition between representatives of all the houses. The honor of the house is emphasized and materialized by trophies and prizes—to houses, not individuals. Of course each house is named. From the older boys who have won the respect and admiration of teachers and fellows come the captains of teams, the "heads" of houses, practically all of the student officials—the untried lower classmen must wait for these honors.

The boy who graduates from one of these schools has a rather intimate acquaintance with, and some personal interest in, boys of all ages from the lowest form up, and with a house master who has had special charge of the one house for years, perhaps. As a member of his house he learned that he counted whether he would or not; he then constrained others to make good, to conform—he became a responsible citizen because responsibility could not be dodged. At work and play our graduate has exerted himself against those definitely superior, testing and developing his own powers deeply. For years he has studied leaders and followers, as such, critically. The traditions, some breadth of social outlook, loyalty, certain ideals and standards are his because his generation has been welded with older and younger generations, the past and the future. A civilization fostered in such schools has elements of strength and permanence.[1]

Homes, schools, nations, cannot teach morals but they can provide the conditions for moral growth. When we become wise and clever enough to take each separate class and by segregation make of it a more perfect generation, the muddauber system for human children will be vindicated. At present we are neither so wise nor so clever. We therefore have but two alternatives, either permit the class to join the past and coöperate in the progress of civilization, or produce a different type of child, one better adapted to the system we have inherited—change either the system or the child.

[1] The House System is used in day schools for girls and in coeducational schools as well as in schools for boys, not uncommonly, in England, Australia, New Zealand, and the Union of South Africa. The master's detailed description of the House System as operated in one English day school is quoted fully on pages 12 to 15, *Peabody Journal of Education*, July, 1927, in an article, "A Better Social Unit for American Schools," by the writer.

THE CLEARING HOUSE

THANKSGIVING PROJECT

The Thanksgiving project was a direct outcome of the farm project. Stories of the first Thanksgiving were told; Pilgrim and Indian life were described. The children decided to model wigwams and canoes out of plasticine. They modelled more fruits and vegetables. As the later fruits were modelled, I noticed more skill in manipulation and more accuracy in judging. They drew with crayons Pilgrims, Indians, canoes, and wigwams. They then decided to write the story of the first Thanksgiving in play form.

To give the children a better and clearer conception of Indian and Pilgrim life, a Pilgrim village was cut out, colored, and set up. This, together with a trip to the Peabody Museum, to see the Indian exhibit there, resulted in many naïve drawings, modellings of various objects, and some construction work.

From this visit they learned how the Indians lived, how they protected themselves, and what they used for weapons; how they caught their prey; how they cooked their food, and how they made their utensils and clothes. They learned the names of the different members of an Indian family—the chief, the squaw, the papoose—thus building new experiences and broadening both their speaking and reading vocabularies.

In the same way they got an idea of Pilgrim dress, customs, and manners, and their relations with the Indians.

The setting up of the village and the trip to the Peabody Museum brought forth expression in the form of riddles, oral compositions, and stories which were later used as reading material.

Values of the Thanksgiving Activity

I. Information gained.
- A. About the Indians.
  - 1. Family: coöperation.
    - a. Chief.
    - b. Squaw.
    - c. Papoose.
    - d. Brave.
  - 2. Customs.
  - 3. Foods.
    - a. Kinds of food.
    - b. Ways of cooking.
  - 4. Dress.
    - a. Types.
    - b. Colors.
    - c. Materials.
  - 5. Utensils.
    - a. Kinds.
    - b. Ways of making.
  - 6. Houses.
    - a. Types.
      - (1) Wigwams.
      - (2) Tents.
    - b. Furnishings: crude.
  - 7. Relations with the Indians.
- B. About the Pilgrims.
  - 1. Family: coöperation.
  - 2. Customs.
  - 3. Dress.
  - 4. Reasons for leaving England.
  - 5. Story of their migration.
  - 6. Relations with the Indians.

II. Coöperation of groups: pride in village through individual and class work.

III. Eagerness for, and participation in, activity led to further activities.
- A. Dramatic play.
  - 1. Without costumes.
  - 2. With costumes.
- B. Popping of corn (corn and popper brought by children).
- C. Making of a Thanksgiving basket.
- D. Party planned and given to other first grade children.

IV. Creative expression through the medium of

A. Oral English: original.[1]

1. Riddles.

She is red.
She carries a cradle on her back.
Who is she? A Squaw.

I am strong.
I am red.
I can sail my boat.
Who am I? An Indian Boy.

I am little.
The squaw carries me on her back.
Who am I? A Papoose.

2. Dreams.

I dreamed I was an Indian boy.
I was riding in a boat.

I dreamed I was an Indian girl.
I had a bow and arrow.

I dreamed I was a Pilgrim.
I asked the Indians to help me plant.
They said, "Yes, we will."

3. Wishes.

I wish I were a Pilgrim girl.
I would help my mother.

I wish I were a Pilgrim boy.
I would help my father plant and build our house.

I wish I were a brave.
I would play with a bow and arrow all day.

4. From pictures (used later as reading).

Look, here are two Pilgrim children.
They have been in the garden picking fruit.
They picked and picked until they were tired.

It is Thanksgiving morning.
The Pilgrim mother has cooked the turkey.
Daddy and baby will eat it.

Gobble, gobble!
I have run out of the barn.
A little boy is chasing me,
He wants to get me for Thanksgiving.
But he only got my feathers.

The Pilgrims are going to church.
They will thank God for their home and their food.
After they come home they'll have a feast.

5. Three Sentence Composition.

I saw the Indian squaw in bed.
The bed was fixed like a hammock.
The squaw looked comfortable.

Oh! ho! See mother squaw holding a papoose.
She is trying to make bowls while holding the papoose.
The papoose is crying.

See the Indian chief.
He is making a wigwam for the squaw and the papoose.
He is working hard.

6. Spontaneous Composition.

My mother bought a tender turkey.
When she cooked it, it fell apart.

I wished on the wishbone.
I wished I had an elastic to make a sling shot.

Last year I saw Indians on the Common.
There was a fire on the grass.
The Indians lighted the fire.
They started to dance around it.

[1] Only a very few examples of each type are given.

PROPERTY OF
GRAND HAVEN PUBLIC SCHOOLS

There was a Pilgrim's house near the fire.
The Indians went into it.
The Pilgrims didn't do anything to them.

B. Art.

1. Drawing and coloring.
   a. Picture books made: free-hand and pattern drawings of Indians, Pilgrims, wigwams, etc.
   b. In connection with reading.
   c. Children draw, the others guess what drawn.
2. Cutting.
   Picture books made: free-hand and pattern cutting of fruit and vegetables, Thanksgiving baskets, wigwams, Peregrin's cradle, papoose, the *Mayflower*.
3. Modelling: wigwams, tents, baskets, fruits, vegetables.
4. Construction: wigwams, baskets, Peregrin's cradle.
5. Printing: signs.
   Indian village, papoose, chief, brave, squaw, Pilgrim village, *Mayflower*, wigwam.
6. Music: Thanksgiving songs.

V. Measurement of Knowledge concerning Pilgrim and Indian life.

A. Silent reading.

1. Sentence meaning.
   a. Pilgrim life.
      The Pilgrims came in the *Mayflower*. No Yes
      The Pilgrims came from Italy. No Yes

   b. Indian life.
      The Indians live in wigwams. No Yes
      The Indian boy is a squaw. No Yes
2. Word meaning.
   a. Pilgrim life.
      The Pilgrims came in a ship train
      The Pilgrims came from France England
   b. Indian life.
      The Indians live in a palace wigwam
      The Indian boy is a squaw brave

B. Oral reading (given by the children).

VI. Measurement of Knowledge of Number.
Counting:
Of fruits made for baskets.
Of Indians in village.
Of Pilgrims in village.
Of Indian children.
Of Pilgrim children.

As Thanksgiving approached, the morning talk centered about the harvest. This led to the making of a Thanksgiving basket. A basket was accordingly cut out and decorated by a child. Fruits and vegetables were colored, cut, and arranged in the basket, and then hung in a conspicuous place on the blackboard (the children selected the place). In answer to direct questions the children built up the following story.

OUR THANKSGIVING BASKET

We made a Thanksgiving basket.
We made the basket out of paper.
We put a large handle on it.
Then Ruth took her black crayons and put slanting lines on it.
That made it look like a real basket.
Then we made fruit.
We made plums, pears, apples, and bananas.
We made vegetables too.
We put them in the basket.
Squash and tomatoes were put in.
Then the basket was finished.
We hung it on the blackboard.
It looked pretty.
We wanted to eat some fruit out of it.

When the basket was completed they were free in their appreciation of it. One

child, who had recently returned from an illness, suggested that as he "got some nice fruit when he was sick, it would be nice to send it to the sick children." But the more sturdy of the group, who had not as yet experienced the many ills which a first grade child is subject to, thought that the basket looked so nice they "hated to part with it." So we compromised by making another for ourselves and sending the first one to the less fortunate children who were not able to share in making it.

The pop-corn, which the children learned that the Pilgrims enjoyed at their first Thanksgiving feast, seemed to impress them sufficiently to attempt to pop some. They wrote a story to sum up the activity.

The trip to the museum was a memorable one. The children bubbled over with eagerness to tell their experiences. The following are readings from their compositions:

GOING TO THE MUSEUM

We went to the Peabody Museum.
It is in Cambridge.
We had a special car.
We took it at Howard Avenue.
We had to ride and ride for half an hour.
Then we came to Cambridge.
We got off the car and walked until we came to the Museum.
When we came there, we went in very quietly,
That was because some people were studying.

WHAT WE SAW AT THE MUSEUM

We saw the Eskimos.
They live in cold countries.
They live in snow houses.
They must dress warm.
So they wear fur clothes.
They get the fur from the animals.
The Eskimo men shoot the animals.
The Eskimo mothers cook them.
The dogs work for them.
They pull their sleds on the ice.

MIRIAM KALLEN,
Brookline, Mass.

THE DEMANDS OF DEMOCRACY ON SCHOOL SUPERVISION

Democratic education demands:

1. That in all educational procedure the developing child, not the course of study, be the center.
   Heretofore and even now in many of our schools much of the work proceeds from the point of view of subject matter with the aim of bringing the child up to the demands of the course of study. This is what democracy feels must be changed.
2. That what the child grows to be is more important than what he grows to know, though what he grows to know should neither be despised nor neglected.
   Democracy, to be sure, is concerned with the nature and kind of knowledge the child gets, but it is vastly more concerned with the nature and kind of behavior that develops therefrom in the life of the child.
3. That coöperation, not competition, is the key word; not how much we can beat the other fellow in life's contest, but how much we can work with him in a joint effort to obtain a certain definite objective for the benefit of the whole. Group life and team work are fundamental in successful democratic procedure.
4. That discipline comes not by repression but by development, not by force from without but by conviction from within. Democracy is not seeking blind, implicit obedience unquestioned, but that full and free response which can come only from conviction.
5. That kind of activity which leads to further activity, which has purpose and aim that lead to definite ends. In this kind of activity waste and haphazard, careless movement are eliminated. Growth and self-direction are instituted and freedom in thinking results.

6. That an opportunity be given for each one to make free and unbiased choice; no preconceived, made-to-order decision is to be forced upon the child. He is to come to his own conclusions in his own way if he is to live fully and freely the democratic life.
7. That there must be a responsible sharing in the aims and purposes of democratic society. Those who are to participate in this democratic life must be made to feel keenly that they are a part of it, and that they must share in the high purposes for which it stands.
8. That there be full and free interplay of the numerous and varied connections, leading to the possible good life to the end that the seemingly conflicting elements work in harmony for the democratic good.
9. That there must be intelligent, well-balanced, and sane leadership to the end that the ship of state may be safely piloted. Those who lead must serve not personal ends but the good of the whole. Democratic society demands this kind of leadership. The school must help to produce it.

School supervision must subscribe to this kind of platform and see to it that every plank in it is fully carried out.

The modern superintendent is arriving and he is coming with a fine personal equipment. He knows how to meet and mingle with the people in the community he is to serve. He knows how to adjust himself to conditions as he finds them. Leadership is an outstanding factor in his personality.

His academic and professional equipment are unquestioned. He knows just where to take hold of his work. He is an expert in getting at and sizing up his teaching force. He soon learns the interplay of the various forces at work in his schools. He realizes that democratic supervision demands of him:

1. That all educational procedure be conducted on the coöperative plan.
2. That supervision in its professional technique and also in its administrative phase must be constructive.
3. That all subject matter of instruction must be built up from the viewpoint of the full and free development of the child.
4. That each child in his school must have an equal chance with every other child to participate in the shared exercises of the school.
5. That all children have equal instructional opportunity.
6. That equal educational equipment be furnished all teachers doing a similar type of teaching.
7. That a spirit of growth be instituted and maintained among his teachers, keeping alive the democratic purpose in education, to the end that we may have democratic citizens living in a democratic society.

W. H. Martin,
District Superintendent of Schools,
Kansas City, Mo.

THE EXCURSION IN MODERN EDUCATION

The purpose of this article is to tell of the actual work done by an Excursion Club, composed of upper grade boys and girls in the Park School of Cleveland. The members of this group elected this club for their hobby period twice a week for the second semester of school. One period was spent in excursions, the other in reports, discussions, and plans for future trips.

Excursions may have many different objectives. They may be conducted by the history teacher to points of historical interest. The civics teacher may take his classes to visit a court room, or to go through city or county buildings, or to investigate community projects. The teacher of vocational

information will endeavor to give those in his charge as much first-hand knowledge of as many industries as possible. The class in chemistry will gain a new appreciation of the value of the subject matter studied if they visit industrial plants in which considerable application of chemical formulæ is made. It was decided that one object of this particular Excursion Club was to give to its members a better idea of what is involved in the everyday conveniences of modern life. The average city child is likely to accept all of these with too little comprehension or understanding, since most of the processes of daily living have been removed from the home.

The first trip was one of the best in point of interest and education gained. It was taken through one of the large city filtration plants, where the water from Lake Erie is made fit for human consumption. One worthwhile phase of this trip was the visit to the laboratory, where they saw the water being given an hourly test for purity, and other water being distilled for special purposes. This led to a later experiment in the distillation of water in one of the discussion periods.

Next in importance to water supply in keeping a city well is its milk supply. The group visited one of the largest creameries in the city, and watched the precautions taken to safeguard the milk bearing the trade mark of the company. They were fascinated by the processes of pasteurization. During the discussion period next day they learned why France regards Pasteur as the greatest of her citizens. Few of the children had ever connected pasteurization with Louis Pasteur.

The club members gained at least a slight idea of the modern methods of food distribution through a visit to a great wholesale house, which imported cacao beans and turned them into chocolate bars; which roasted green coffee, ground, and packaged it; which canned fruit, packed olives, and did many interesting things to prepare food for distribution to retail dealers.

Since the making of clothing is, next to iron and steel, the chief industry of Cleveland, it was only natural that a visit to a great clothing concern should be one of the excursions. Here they saw how completely the machine has taken the place of hand labor in the garment trades. It was rather breath-taking to watch a machine which could cut out ninety suits at once, while it would be a consolation to a bachelor to realize that buttons are now attached by machinery.

Food, water, milk, and clothing are necessities, but such modern conveniences as the telephone, the daily paper, and the radio play almost as great a part in the life of today. In visiting the Bell Telephone Company, the children's greatest thrill came when they were allowed to go up to the roof some twenty odd stories high and look over the parapet at the city below. The exchange in the smaller city could furnish the same information in regard to processes, however. The long distance room was the one in which the members found themselves most inclined to linger. Of course the report which followed included a discussion on the life of Alexander Graham Bell.

No child who went through the building devoted to publishing the *Plain Dealer* could fail to have a greater appreciation of the labor involved in getting out a city daily. There would, however, be a real advantage in visiting a smaller printing establishment, where the multiplicity of detail would be less overwhelming.

Radio became more of a reality and less of a mystery through a visit to the broadcasting station, WTAM. The club had wished to follow this by a trip to the Willard Storage Battery, under whose auspices the broadcasting station is operated, but it

was found that adult visitors, only, were admitted because of an element of danger.

Not every city contains a Federal Reserve Bank, but there are few schools which would not be able to visit a local bank. The trip through a Federal Reserve Bank is, however, especially interesting and worth while, especially for a civics class. The page devoted to it in the average textbook makes of it a somewhat dry and abstract subject, but an excursion through such a bank clothes the dry bones of the subject with flesh and blood and makes a reality of the great "bank for banks."

The subject of transportation was not neglected by the club. Most of the members voted that the trip which they most enjoyed and from which they learned most was the one to the city airport, where they spent some two hours watching the planes come and go, seeing student aviators practice landings, having the different types of planes explained to them, looking at the sea plane, "Miss Detroit," which Amelia Earhart had christened only the week before, on its initial trip across Lake Erie. They saw a mail plane come in with its load, were surprised to learn that a tractor was used to pull the big Ford Tri-motor out of the hangar, and watched it take off for Detroit.

Another phase of transportation was studied in a trip through an automobile factory, and a third when they looked down at the network of railways coming into the new Union Station, from their vantage point of the fifty-two story Terminal Tower. A trip to the docks had been planned, but at the last moment the necessary permission to go to the freight docks could not be obtained.

A glimpse of "how the other half lives," and where some of the money contributed to the Community Fund is spent, was afforded by a visit to one of the larger settlement houses of the city. They found many interesting classes in session, and were especially attracted by hand looms on which several foreign girls were making some beautiful cloth. Of course a report on Jane Addams followed this trip. Going through the county jail convinced them that the rewards of "straying from the straight and narrow way" were not pleasant. Visiting a court room where a civil suit was being tried gave some valuable information in court procedure.

Several trips were taken for purposes of recreation. One of these was to the Playhouse, where they went behind the scenes, saw part of a rehearsal, and watched scenery being painted for a coming production. Others included a big league baseball game; a trip to the municipal zoo; and a visit to a good amusement park, where they were the guests of one of the members, whose father was the owner.

Had time permitted, and in some cases (such as a visit to a steel mill) could arrangements have been made, many othe trips could have been taken in line with th general objective of the club. Much could be learned by trips through a bakery, a laundry, a large department store, a modern hotel, a canning plant, a packing house, or a textile mill. Trips to the museum and library were purposely omitted, because they had been visited many times in other connections.

The world in which the modern child lives is a complicated one, and every possible device for helping him to understand it should be used by the school of today. Books, pictures, slides, moving pictures—all of these are good, but they will be made more meaningful by some actual excursions to the places studied. They will not only give much general information to the children who take them, but will also make more understanding citizens of them.

Adda Ditts,
Kalamazoo, Mich.

AS REPORTED

ORIENTING THE TEACHER

Teachers' handbooks are rare. Occasionally, however, a principal realizes that the members of his staff are entitled to definite information on a number of points and ought to have it in print. Through the courtesy of Superintendent Wegner, of Waupun, Wisconsin, we are able to publish a good example of directions as to routine duties. Comments on this information sheet are invited.

General Routine Duties of Teachers

Teachers Are Expected:

1. *Time in School.* To be in their rooms at least *one-half hour before* the beginning of classes and to *remain at least one-half hour* after the close of their last class in the day to assist retarded pupils who may come for help.

   It is advisable for teachers to be in their rooms when pupils begin to enter. They should not encourage or tolerate loafing in classrooms by pupils. The classroom should be thought of as a *work laboratory,* the teacher guiding the activities of pupils. Teachers should not dismiss pupils before the regular time or leave the building during school hours without permission of the superintendent or principal excepting in cases of sickness or accident which will not permit delay, in which case same should be reported to office.
2. *Records and Reports.* To keep such records and reports as may be required by the superintendent or principal and to be prompt in the rendering of same.
3. *Teachers' Meetings.* To attend all teachers' meetings and be prompt in such attendance unless excused by the superintendent.
4. *Grievances.* To tell their professional grievances, if they have any, to the superintendent rather than to others. (Try him and see what he can do for you.)
5. *Suggestions.* Feel free to offer suggestions to the superintendent concerning their work and that of the school. The superintendent will welcome suggestions. He *wants* them.
6. *Dismissal of Pupils.*
   a. To send home any child who is suspected of having a contagious disease or in whose home such disease is thought to exist. (Give the school the benefit of the doubt.)
   b. To prohibit any pupil to remain in school when he appears ill, without a doctor's permit.
   c. To send home any pupil whenever his presence, because of vermin, filth, etc., is obnoxious.

   Note: These are duties prescribed by the State Law. In sending home pupils for any of the above causes, the principal, superintendent, and parent or guardian should be notified either in person or by note.
7. To keep a lesson plan book in which to plan their work a *week ahead,* this book to be kept on the teacher's desk available for the superintendent and substitute teachers. No matter how familiar the teacher is with her work, no teacher should go to class without first looking over the material which she proposes to teach. She should decide beforehand what material she is going to teach, how she is going to teach it, what points are to be emphasized and to check the work that has been taught.
8. *Teacher Absences.* To report absences for illness to the superintendent, who will provide substitutes. Likewise, arrangements for teacher's absence, whatever the cause, would be made with the superintendent.
9. *Co-operation with Principal.* To follow the instructions of their respective principals unless by chance the latter should request something contrary to the superintendent or Board of Education.
10. *Co-operation with Special Teachers.* To take note of the requests of special teach-

ers and supervising teachers who are representatives of the superintendent. Requests from such teachers are his requests. If there are any objections to same, the latter should be brought to the attention of the superintendent before refusal to comply is made.

11. *Sending Pupils on Errands.* To send pupils on errands during school hours *only* on urgent school business, in which case a privilege card should be issued by the teacher, which in turn should be countersigned by the principal or superintendent.
12. *Sending Pupils from Room.* To send pupils from classrooms only when such appears to be a necessary disciplinary measure, in which case they should be sent directly to the principal or superintendent, bringing with them a disciplinary note stating definitely why they are sent. During the teacher's free period which follows, the teacher should see the principal or superintendent about the case. Never simply send a pupil from class. (Special forms are issued for this purpose.)
13. *Daily Programs.* (Grades.) To send to office, within a week after school begins, a detailed copy of their daily program, a copy of which should be displayed in each room at all times, and all contemplated changes should be referred to the superintendent before such changes are made.
14. *Hall Duties.* To assume a post outside their classroom doors and assist in maintaining order while pupils are passing to and from classrooms and at dismissals.
15. *Housekeeping.* To attend to the ventilation and temperature of classrooms, adjust window shades, etc. Shades should always be raised excepting in cases of direct sunlight or strong light which pupils may be required to face.

    Whenever the ventilation plant is not functioning, the rooms should be aired at each intermission. When this is done keep classroom door closed.
16. *Assembly Room Charts.* All H. S. teachers having charge of the assembly room should make a chart showing names and places of pupils in assembly room periods and to check the attendance each period.
17. *Pupils Leaving Room.* Teachers should guard against allowing pupils to leave the room too often or unnecessarily. Unless the teacher is careful in this respect, pupils will continually and habitually ask to leave the room simply to take a walk or wander about. Where the latter seems evident on the part of the pupils, they should be requested to *make up all time lost* and more if they continue to abuse the privilege.
18. *Report Cards.* To have their work so planned that report cards may be issued the Monday following the month or period for which the card is made out.
19. *Discipline.*
    a. To be discreet and judicious in all matters of discipline, avoiding haste and prejudice but at the same time firmly insisting on good order.
    b. Special attention should be given to habits and manners of pupils. Pupils should come to order promptly when the second signal has rung.
    c. Insist on *quickness of movement* on the part of students. Physical quickness and alertness tend to produce mental quickness and alertness.
    d. Initial discipline is important. The attitude which you take toward your class the first few days will determine largely the problems which you will have to face later. It is better to begin with relatively high standards of discipline and then make more liberal adjustments than to begin your work in an easy, indifferent (happy-go-lucky) manner and then later find it necessary to lay down drastic rules in order to maintain discipline. Let the pupils feel that you mean business that you expect to be fair to them and expect in turn that they will play fair with you. Deal with your problems yourself whenever possible. Inform me of any drastic action which it has been necessary to take or which is contemplated. I am responsible and would like a history of the case from the teacher's viewpoint.

    Teachers should learn above all t

govern themselves well. (See bulletin on Discipline.)

Punishment. Some form of punishment will probably be necessary at times and no phase of the teacher's work demands more careful deliberation, tact, and good judgment than the inflection of a punishment. *Corporal punishment* should always be avoided except in extreme cases. It is advocated less and less by thoughtful and experienced teachers. All cases requiring corporal punishment should be referred to the superintendent or principal for advice. The promiscuous use of ridicule, sarcasm and irony indicates a wrong spirit on the part of the teacher and is likely in turn to develop a wrong attitude on the part of the pupils. Some teachers can use these means very effectively, while others only make matters worse by the use of same.

Deportment. To refrain from reducing a pupil's grade in his academic work because of deportment. Scholarship marks are intended to be, and as far as possible should be, reliable records of the pupil's knowledge of certain subject matter. When these records are changed for purposes of punishment they cease to be such. Truancy may be punished by requiring the pupils to make up all lost time and work outside the regular class period.

20. *P. T. A. Meetings.* To attend P. T. A. meetings held during the year and make an effort to get acquainted with the parents.
21. *School Census.* To check over school census as soon as it reaches your respective grade and report all pupils enrolled who are not listed and vice versa.
22. *Sections.* To section classes where necessary on the basis of ability where possible to do so.
23. *Excuses.* To require excuses in person or by written note from parents or guardians of pupils who have been absent or tardy, which should be filed for future reference. Whenever a pupil fails to bring a required excuse, or if the excuse offered is doubtful or unsatisfactory, same should be verified by getting in touch with the parent or guardian.

High School pupils who have been absent or tardy shall not be admitted to classes without an excuse signed from the office on forms provided for this purpose.

24. *Care of Equipment and Books.* To exercise reasonable supervision over furniture, equipment, and apparatus in their rooms and over texts owned by the school. Unwarranted damage to same should be reported to the principal, who should assess and collect a fine which will repair or replace item damaged. Try to stimulate in students a regard for school and public property. Proper care and decoration of the schoolroom and tidiness of the person will tend to accomplish this end.
25. *Aiding the Janitor.* To aid the janitor in so far as is possible, by enforcing all orders concerning the disposal of wastepaper, pencil shavings, etc., and by keeping their rooms neat and tidy. Pupils should not be allowed to tear sheets of paper into bits and drop these on the floor or allow them to remain where they are likely to be scattered. Teachers should see that pupils do not leave the room in an untidy condition. Before the period closes, the teacher in charge should see to it that books, magazines and newspapers are returned to their proper places and that wastepaper, etc., is disposed of so that room is in a tidy condition for the next period.
26. *Detaining Pupils After Class.* To notify the next teacher when detaining a pupil at the close of a class so that he is late to his next period class. The teacher detaining the pupil should issue a privilege card to the pupil explaining the detention to the next teacher. (It is not necessary in this case for the pupil to report first to the office.)
27. *Housekeeping.* To keep your rooms tidy, Your rooms should show good housekeeping. Your desks should present an appearance other than chaos especially when left for the day. The compartments in your desk should have some arrangement so that material needed can be secured without turning everything topsy-turvy. Pupils

notice these things—they are learning habits, slipshod or otherwise.

28. *Supervision.* To invite supervision. Supervision will be of two types, casual and specific. In either case the teacher is to feel that the supervisor desires to help her rather than that he is looking for faults. The supervisor desires to see you at your *best,* not at your worst. Invite him to your classes—don't wait for him to come.
29. *School Hours.* To remain in classroom a reasonable length of time after dismissal. Do not rush away from your work immediately at the 3:50 dismissal. Pupils may need special help. Plan to stay at least a half hour or more. "The person who is always afraid of doing more than he is paid for will never be paid for more than he does."
30. *Exploration.* To plan your work. Your first week's work will be largely exploratory. Find out what the pupils know and what they lack. Teach what they need rather than the order in which subject matter is contained in the text. Get a bird's-eye view of your class and its problems. Set your goal and aim to achieve results.
31. *H. S. Absence and Tardiness Permits.* To observe attendance rules.
    a. After an absence from school of one period or more, students are required to report as soon as they return to school to the superintendent's office and receive permission to be reinstated in their classes. If their reason for absence is worthy, they will receive an excused permit, which gives them the privilege of making up work which they failed to do during their absence. The limit of time allowed for make-up work shall be equal in length to the period of excused absence. If the reason for the absence is unworthy, an unexcused permit will be issued, which gives the student zero for each recitation missed. Each *unexcused absence counts* 3 per cent off the daily average for the 6-weeks term.
    b. If a student is tardy he likewise reports to the superintendent's office and receives permission to enter class. An excused permit gives the student the chance to make up the work missed, but an unexcused permit gives the student zero for the class period for which he is tardy and counts 1 per cent off the daily class average.
    c. Teachers are required to keep a permanent record of all absences and tardiness and to report same. During or at the close of each school day they are required to bring or send to the office a carefully made out slip of those absent or tardy during the day and file them with the attendance secretary.
    d. When a pupil is tardy 15 minutes or more, such tardiness constitutes an absence.
32. *Mail.* To call at the office at the opening of school both in the morning and at noon for any mail or notices which may have been placed in your mail box. By so doing you will help simplify routine matters and be informed as to important notices, meetings, etc. (Make this a habit.)
33. *Keys.* To bring your keys with you. If you borrow the office duplicate be sure to put it back on the key board—don't take it with you to replace the one you may have lost.
34. *Memorandum Slips.* To sign memorandum slips. This form will be used from time to time and usually posted on the bulletin board and on which you are to check after your name with reference as to whether the item called for has been attended to or not.
35. *Extra-curricular Activities.* To assist in extra-curricular activities. These will be apportioned among the teachers according to their previous experience and training and their teaching load. Reports are required for the various activities from time to time and these should be turned in promptly.
36. *Bulletins.* To read bulletins. We shall continue to be guided in our teaching by bulletins which shall be issued from time to time. These are to be read by the teachers and filed for future reference. Be pre-

pared to suggest topics on which you would like bulletins issued. Some of the bulletins may be a repetition of those issued last year, some will be revised and some new. There will also be a professional reading shelf reserved in the office from which teachers may check out material relating to problems they are interested in.

37. *Visiting Days.* To report visiting days. The plan to be followed this year for visiting days will be as follows:
    a. The teacher indicates city, school and grades he proposes to visit to the superintendent, who is to approve same. (We want to visit schools where such visits will in turn benefit the work in our own system.) Teachers' preferences will be carefully considered.
    b. Your superintendent will write the superintendent of the school to be visited, informing him of the teacher's intended visit and asking him to notify the teacher to be visited, so that work observed will be at its best and of greatest benefit to the visiting teacher.
    c. An oral report must be given to the superintendent concerning the teacher's visit upon his return.

    Note: By following the conditions listed, both the visiting teacher and our schools, it is hoped, will receive practical benefits and such visits will not be a farce, a mere friendly visit.
38. *School Stationery.* To refrain from using school stationery. School stationery and envelopes are to be used *only for official school business.* Same is not to be used for personal correspondence or personal business. If teachers desire to use a form of school stationery, the same can be printed at a nominal cost.
39. *Telephone Calls.* To charge personal telephone calls to home phone. Personal charge calls should have charges placed on teacher's home phone preferably, or charge paid at office.

ONE HUNDRED PER CENT PROMOTION

Public School Number 114 in New York City is experimenting with a plan in accordance with which all pupils are promoted. Those who by reason of deficiency are not capable of going on with regular classes are segregated in special classes and their work departmentalized so that each pupil works in each subject with a group of approximately his own ability in that subject. Progress is measured from time to time by means of standardized tests and adjustments are made as they are indicated. The plan is found to be feasible even in the lower grades.

Principal Griffin argues that non-promotion should go the way of corporal punishment, especially in view of the fact that at present our knowledge of children, our courses of study, our methods of teaching, and our means of measuring progress are not sufficiently under scientific control to warrant our drawing a line through a class and leaving certain members behind on promotion day. We are not assured that non-promotion in a particular case will result in the mastery that has not been reached. Moreover, non-promotion as now practised ignores the fact of inequality among teachers and hence inevitably works injustice to the pupils. It is non-economic; it contributes to juvenile delinquency; dispensing with it does not result in the evils, such as falling off of effort and lowering of standards, that are supposed to follow.

The plan in use in this school is based upon a body of clearly-defined principles and is conducted as scientifically as modern knowledge will permit. Extensive studies into the causes of "retardation" have been made and attempts made to remove or lessen them. The burden of proof seems to rest upon those who are opposed to such a plan and it deserves serious consideration upon its merits.

A leaflet describing the plan in detail and meeting the arguments against it may be obtained at the National School of Method, 225 Fifth Avenue, New York City.

SELECTION OF TEXTBOOKS IN GRAND RAPIDS

During the first semester of the school year 1928-29 a committee of teachers and principals in the Grand Rapids schools worked upon the problem of selecting an arithmetic text for grades 3, 4, 5, and 6. It seemed advisable to build a score card for this purpose. The score card which follows suggests perhaps an ideal text. However, it was planned to choose the text which satisfied the largest number of these conditions. The opinion of experts was sought as to the relative importance of the items in the score card.

Score Card for Judging Arithmetic Textbooks

I. Aims and functions.
   1. Does the book conform in general to the aims set up in our curriculum?
   2. Is the book the type that can be put in the hands of the children as a laboratory manual?

II. Subject matter.
   1. Does the book conform in the main to late scientific evidence and to our curriculum in the matter of grade placement, subject matter and method?
   2. Is the text self-teaching while containing a minimum of explanatory material?
   3. Is it organized and written in terms of pupils' experience and understanding? Specific examples.
   4. Where possible, does it conform with method used in business practice?
   5. Is the book made up with a vocabulary suitable for the grade? How has the vocabulary been checked?
   6. Are the fundamentals presented progressively without too many steps of difficulty at a time?
   7. Is the subject matter presented so as to stimulate active and aggressive thinking?
   8. Does it enlist the child's interest in his own progress by the use of suitable graphs, charts, standards of achievement, etc.
   9. Does the text provide for individual and group differences?
   10. Are there helpful reviews, tests, and remedial materials?
   11. Is the problem material
      a. Within the experience of the children?
      b. Connected with life situations?
      c. Made up of accurate and truthful data?
      d. Stated clearly, concisely and to the point?
      e. Constructed with emphasis on estimating, approximating, and checking results?
      f. Accompanied by definite procedure for problem solving and practice therein?
   12. Is the drill material
      a. Adequate to fix processes?
      b. Adequate to maintain skill?
      c. Rich in variety?
      d. Distributed according to relative difficulty?
      e. Built according to scientific rules for drill?

III. Physical make-up.
   1. Is the appearance of the book attractive to children?
   2. Is the binding durable and such that the book can be laid flat? What tests of durability have been made?
   3. Is the paper of good quality, white and non-glossy?
   4. Is the type clear and of a size adapted to the grade?
   5. Are the pictures, graphs and games educative and interesting?
   6. Is the material arranged well on the page with suitable margins and spacing?
   7. Are there adequate and correct table of contents and index?

THE READER'S GUIDE

LEARNING AND TEACHING

For some years Professor William H. Burton has been engaged in reorganizing the introductory course in education at the University of Chicago. The results of his labors are to be embodied in a series of college texts, the first of which has just appeared.[1] The volume will attract much attention and deserves favorable consideration. It reflects throughout the actual work of the classroom and one is not surprised to learn that trial editions have been carefully criticized in preparation for the finished volume.

The point of view is distinctly psychological. The method is primarily that of discussion. Opposing views are presented and the author's own position stated in relation to them. Both the problem attack and the unit plan of instruction are employed throughout. The author dispenses with chapters and presents large units instead. Good organization is a prominent feature; this is emphasized by means of a full topical outline near the beginning. Both instructor and students are oriented at the outset by means of a section in which the purpose and plan of the work are clearly set forth.

The ground covered may be seen by reference to the main headings, which are as follows: I. The Nature of Learning and Teaching. II. General Factors Affecting Any Type of Learning. III. The Learning Types and Their Direction. IV. The Pupil's Subsidiary Learning Activities. V. The Teacher's General Activities. Outstanding issues presented include misconceptions as to the nature of learning, individual differences, the influence of age, the place of drill, the project method, development of good habits of study, proper use of books, testing, and diagnosis.

The treatment is concrete, informal, and interesting. The author preserves a moderate or eclectic attitude throughout, and the book as a whole is obviously the expression of an inspiring and effective teacher. The student will meet with much challenge to thinking and should emerge with a sound body of doctrine to guide his practice. The reviewer will recommend the book to his own classes with enthusiasm.

A SIMPLIFIED THEORY OF TEACHING

The need for a clearly organized and simply stated exposition of the theory of teaching in accordance with the "laws of learning" has been admirably met by Professor Reeder, of Teachers College.[2] As he rightly says in the preface, the forbidding terminology of the psychological expert, necessary for him, repels the practical teacher. At the same time the teacher often fails to make a reasonable effort to apply the theory she has been taught. Sound theory is always necessary to efficient practice.

Professor Reeder's book is aimed at both teachers and supervisors. It is brought to a focus in the presentation of a diagnostic check sheet for the study and evaluation of teaching. This is based upon Thorndike's laws of "readiness," "exercise," and "effect" and is a real contribution. It is truly an achievement in simplification and should prove satisfactory in use.

This book reflects the experience the au-

[1] *The Nature and Direction of Learning.* By William H. Burton. D. Appleton and Company, 1929.
[2] *Simplifying Teaching.* By Edwin H. Reeder. Laidlaw Brothers, 1929.

thor has had in the conduct of demonstration lessons and the collection of stenographic reports of teaching. There is a wealth of concrete examples. The point of view is that of a moderate, who knows the radical position but who cannot forget conditions as they are. If there is a marked shortcoming, it appears to be due to overemphasis upon "knowledge" as the outcome of learning and teaching. The reader is conscious of a certain lack of attention to expressive and creative activities and to both skills and attitudes as outcomes. In this respect the book reflects the enduring influence of the Herbartian tradition and perhaps the later preoccupation of some of the prominent Herbartians with thinking and problem-solving to the exclusion of other equally educative activities.

Normal schools, extension classes, and reading circles will all welcome this addition to the list of available texts for the study of teaching. The absence of references is unusual but in fact not important. Competent instructors generally prepare their own bibliographies anyway. Questions for discussion are supplied.

WHAT IS PROGRESSIVE IN TEACHING?

A definite trend in treatises on method in teaching is discernible. They tend to be more and more treatments of applied psychology and they emphasize what the pupils should do rather than what the teacher should do. Professor Palmer, in writing a book in the current mode, has chosen the title, *Progressive Practices in Directing Learning*,[3] and this combines two of the phrases most recently coined for use in educational discussion. Like the volumes by Professor Burton and Professor Reeder, this book is the outgrowth of experience in conducting courses in a university school of education and represents the author's view of what the classroom teacher should know concerning the stimulation and guidance of pupil activities. This book, too, is clear and well organized. The eleven main propositions that are explained and defended in the body of the work are first briefly stated in an introductory chapter. These relate to the nature of learning, the direction of activities appropriate to different types of learning, providing for individual differences of pupils, use of visual and other aids to learning, testing progress, diagnosing particular difficulties and applying remedial measures. The treatment is, therefore, more comprehensive than Reeder's and less so than Burton's. There is, too, an absence of controversial matter prominent in the latter.

A wealth of specific examples lightens the pages and gives force to the author's contentions. Indeed, the text might almost be described as a very full syllabus with illustrations. This will appeal to instructors who are seeking a good outline as the basis of a course in teaching. The subjects of study taught both in the high school and in the elementary school are freely drawn upon to give point to the author's discussions of the various types of learning. Thus the work is to some extent a guide to teaching the various subjects—a volume of "special" methods as well as one of general method. Recent scientific studies are well represented, both in the body of the text and in the references. Teachers' colleges will doubtless welcome a text on a level suited to the maturity of juniors and seniors. This one is distinctly a work book with concrete materials, fitted to the teaching of a definite technique. The student who uses it will probably learn to say, "These are the facts," rather than, "It is my opinion." As such it is in marked contrast to the collections of practical advice and philosophical analyses that so recently constituted the methodology of teaching.

[3] *Progressive Practices in Directing Learning.* By Anthony R. Palmer. Macmillan Company, 1929.

TYPES OF MALADJUSTMENT

That the teacher must be able to do much more for children than merely "teach" them grows increasingly evident. The new teacher must know how to study the nature and perhaps the disabilities of the individual child and assist him in becoming "adjusted" to the social life about him. What has been true for some time of the physical needs of children is rapidly becoming true of their mental needs; the school must minister to them as particular cases may demand.

How this may be done is graphically portrayed by Miss Zachry in her account of five typical case studies carried on in the Lincoln School of Teachers College.[4] The kinds of children dealt with were as follows: the troublesome, the over-conscientious, the over-dependent, the over-anxious (fearful), and the sufferer from polyglandular trouble. In each case the symptoms and their interpretation are described, the treatment actually given outlined, and the implications for the classroom brought out. The whole is rounded out with a chapter on the elements of personality and their adjustment.

This is a book that should be read and pondered by all parents and teachers and that should be prescribed in institutions in which prospective teachers are being trained. Children deserve to be treated in the light of modern knowledge of traits of personality and how to deal with maladjustments in character and conduct. The facts so graphically presented here will greatly assist parents and teachers in doing this. To many, Miss Zachry's account will open up a new field for study and investigation and it is hoped that they will continue until they have attained a mastery of it at least comparable to that regarded as a necessity for the conduct of classes and direction of extra-classroom activities. We have in such books as this a scientific basis for a new and enlightened type of school discipline and the beginnings of character education that is something more than sentiment and pious hopes. It is pleasant to think that the author has herself become a teacher of would-be teachers and is therefore in a position to give to others in person the benefit of her experience in dealing with problems of personality.

EDUCATIONAL GUIDANCE IN HIGH SCHOOL

Principal Sandwick of Highland Park, Illinois, is well known for his efforts to work out effective methods of guidance for the students of his school. To his widely used text on *How to Study* he has now added an attractive handbook of somewhat broader scope.[5] The conception embodied is that of study as contributing to the development of personality. The author sets up an ideal and presents a technique for reaching it.

In view of the purposeless and ill-directed efforts still too often characteristic of secondary school students—and of college students as well—this book is clearly of importance. The student should realize what he goes to school for and how he should employ his time when he gets there. Merely providing lengthened periods and writing "supervised study" on the schedule will not insure his doing so. In fact it has signally failed to accomplish it. The student must be taught skilfully and persistently both why and how. Mr. Sandwick has prepared a very readable handbook to help do this. Its use is known to have contributed markedly to the student's success

[4] *Personality Adjustments of School Children.* By Caroline B. Zachry. Charles Scribner's Sons, 1929.
[5] *Study and Personality: A Textbook in Educational Guidance.* By Richard L. Sandwick. D. C. Heath and Company, 1929.

both in high school and later in the college course.

After setting forth the purpose of schooling, the author emphasizes in turn right attitude, the budgeting of time, use of memory, concentration of attention, right atmosphere, conserving energy, and creative thinking. Finally he offers advice on how to choose a course and how to acquire a personality. The treatment is intimate and friendly; the student will read on because he is interested. Important points stand out clearly, and the way to further reading is indicated. The best teachers in the school should be placed in charge of groups for the discussion of the several chapters and all other teachers should be induced, if possible, to supplement and support their efforts.

If some of the time now devoted in high school to the traditional subjects, such as foreign language and mathematics, could be set apart for such studies as this book exemplifies, the students would undoubtedly be profited. Such a general treatment of study might well be followed by more specific consideration of the methods of work appropriate to different types of activity, not omitting both creation and interpretation in the fine and industrial arts. As Dewey once said, "Pupils should know in every lesson what they are to learn and what they must do in order to learn it."

SIGNIFICANT ARTICLES

SCIENCE AND CREATIVE EDUCATION

In the *Chicago Schools Journal* for September, Professor Frank N. Freeman of the University of Chicago discusses the relation between scientific method and creative education. He defines the latter as "some form of constructive activity, using 'constructive' in the broad sense of the word." According to this idea, what the child learns is incidental to what he does. So far science has given but little assistance in the development of a program of constructive activity. Its present preoccupation is with appraisal rather than discovery. It is needed, however, as a means of determining the place which such play activities as are characterized as creative education actually should occupy in the education of children. Two aspects of the individual's development must be cared for: (a) adaptation to social life, and (b) integration of personality.

THE SCHOOL ASSEMBLY

A large portion of *New York State Education* for September is given up to a series of articles on the assembly in high school and elementary school. Most of the contributions tell briefly what is actually being done in various parts of the State. We read, for example, of an orchestra in the Glens Falls High School, chorus singing in Buffalo, the use of themes related to the seven cardinal principles in Ilion, a talk on the Byrd Antarctic Expedition in Tonawanda. As an example of how the assembly is used in the Washington Junior High School in Rochester, the program on Memorial Day, May 29, 1929, is given in full, together with programs on health and citizenship. Jamestown contributes a list of special programs showing a remarkable range of interest. The series of articles is illustrated with original photographs.

THE UNTRAINED TEACHER AS A LIABILITY

A brief but forceful plea for the best possible trained teacher is presented in the *Pennsylvania School Journal* for September by Professor Judd of the University of Chicago. The writer points out that it is not easy for an amateur in any walk of life to recognize expertness. This is illustrated by the case of a former student who returns to visit his teacher and discovers the use of effective method which he has

never noticed before. Parents are becoming better informed as to the work of their children and hence are growing more capable of distinguishing between good teaching and poor teaching. At the same time the task of the teacher grows more exacting. Reading, for example, now falls into several types, in each of which the teacher is expected to be competent. Likewise mere drill is no longer considered satisfactory in the languages and mathematics of most schools. The members of the teaching profession itself should be awake to the possibilities of harm which can be done by those not properly trained for teaching. Specifically they should point out to the members of the community the advance which the science of education has made in order to bring about a wider appreciation of the necessity of improved professional standards.

RUSSIAN SCHOOLS FOR LITTLE CHILDREN

In *Childhood Education* for September appears an interesting account of the infant schools of Russia, by Miss Lyford of State Teachers College, Greeley, Colorado. These schools are said to be very different from those found in other countries. The Soviet Union assumes responsibility for each child when it reaches the age of three. Before this the child is in the care of the Board of Health. Nursery schools are conducted in connection with trade unions or state factories. In some of these visitors are taken to observe children ranging from six weeks to three or four years of age. In some of the best of the institutions experimental work is carried on under the direction of the Board of Education. This is especially the case in Moscow. The kindergarten children are visited by the Pioneers (the boy scouts of Russia), who speak to them three or four times a week. Excursions play a large part in the day's program. The writer was impressed with the earnestness of the workers in charge of the schools for young children in Russia, and learned that many of them are looking to the United States for advice and help.

NO HOME WORK

On the moot question of home work, Superintendent William H. Holmes of Mount Vernon, New York, has positive convictions. Writing under the title, "Home Work is School Work Out of Place," in *American Childhood* for October, Dr. Holmes reports that a recent investigation of the opinions of students themselves shows that they at least are opposed to home work. They feel that the teachers do too much assigning and too little teaching. The situation might be remedied by the use of a longer school day, fewer studies, and more consideration on the part of the teachers. Doctor Holmes thinks the American public school is still too much of a reciting center rather than a learning center. Teachers should cooperate in attempting to improve pupil assignments. Definite information should be obtained as to the home conditions under which pupils must work. Possibly the institution of "drives" on certain subjects at certain times might tend to break up the monotony which now too often attaches to subjects that continue at the same pace throughout the year. If there is home work at all, it should be voluntary.

THE NEW BOOKS

Methods and Teaching Problems in Industrial Education. By F. Theodore Struck. New York: John Wiley and Sons, 1929. Pp. 214. $2.75.

Teachers College, Columbia University, New York: Contributions to Education, 1929: No. 339, *Personnel Study of Directors of Physical Education for Men in Colleges and Universities,* by Harry A. Scott; pp. 90. No. 341, *Health Subject Matter in Natural Sciences,* by Claude S. Chappelear; pp. 108. No.

344, *The Psychology of Learning Applied to Health Education Through Biology,* by Anita D. Laton; pp. 103. No. 348, *The Modifiability of Response to Taste Stimuli in the Preschool Child,* by Marguerite E. Gauger; pp. 53. No. 349, *Legal Limitations on the Rights and Powers of School Boards with Respect to Taxation,* by Wayne W. Soper; pp. 124.

Simplifying Teaching. By Edwin H. Reeder. Chicago: Laidlaw Brothers, 1929. Pp. 192.

Contemporary Education. By Paul Klapper. New York: D. Appleton and Co., 1929. Pp. 660. $2.40.

Educational Psychology. By Rudolf Pintner. New York: Henry Holt and Co., 1929. Pp. 378. $2.50.

Efficiency in Vocational Education. By J. C. Wright and Charles R. Allen. New York: John Wiley and Sons, 1929. Pp. 443. $3.00.

Mathematics Preparatory to Statistics and Finance. By George N. Baurt. New York: Macmillan Co., 1929. Pp. 337. $2.00.

General Psychology. By Carl N. Rexroad. New York: Macmillan Co., 1929. Pp. 392. $2.10.

The Objective or New-Type Examination. By G. M. Ruch. Chicago: Scott, Foresman and Co., 1929. Pp. 478. $2.20.

Sentence and Theme. Third Edition. By C. H. Ward. Chicago: Scott, Foresman and Co., 1929. Pp. 504. $1.32.

A Second-Year Latin Reader (A revision of *A Junior Latin Reader*). By Frederick W. Sanford and Harry F. Scott. Chicago: Scott, Foresman and Co., 1929. Pp. 671. $1.60.

Motion Pictures in the Classroom. By Ben D. Wood and Frank N. Freeman. Boston: Houghton Mifflin Co., 1929. Pp. 392. $1.80.

The New Path to Reading—Book One. By Anna D. Cordts. Boston: Ginn and Co., 1929. Pp. 190. Illus. $.64.

Science and the Way to Health. By J. Mace Andress and Maud A. Brown. Boston: Ginn and Co., 1929. Pp. 367. Illus. $1.00.

Education in the United States. By Edgar W. Knight. Boston: Ginn and Co., 1929. Pp. 588. Illus. $2.60.

La Lecture Expliquée. By Albert L. Cru. Newark: Silver, Burdett and Co., 1929. Pp. 177.

IN PAPER COVERS

A Work Book for Principals and Supervisors. By Robert H. Lane. Third Edition. Los Angeles, Calif.: Los Angeles City School District, 1929. Pp. 159.

Curriculum Bulletin No. 5—Teaching in Grades Four, Five and Six. Raleigh, North Carolina, Public Schools. Pp. 136.

New Stanford Achievement Test. By Truman L. Kelley, Giles M. Ruch, and Lewis M. Terman. Yonkers, N. Y.: World Book Co., 1929.

Improvement of Reading in Rural Schools Through Individual Instruction. By Margaret M. Bieri and C. P. Archer. Moorhead, Minn.: State Teachers College, 1928. Pp. 51.

Bulletins of the School of Education, Indiana University: Vol. III, No. 3, *Index Numbers in School Administration,* by Harold F. Clark; pp. 32. No. 4, *Topical Analysis of 234 School Surveys;* pp. 111.

Economic Survey Report. Manila, P. I.: Department of Public Instruction, 1929. Pp. 72.

Child Labor. Edited by Gertrude F. Ziman. Reprinted from *The American Child.* National Child Labor Committee, 215 Fourth Avenue, New York City, 1929. Pp. 39.

Prospecto del Colegio Americano e Instituto Comercial Ward, 1929. Buenos Aires: Rivadavia 6100. Pp. 47.

THE HADDON CRAFTSMEN
CAMDEN, N. J.